

78, the compulsory Sunday observance bill; to the Committee on the District of Columbia.

5075. Also, petition of R. T. Ballard and other residents of the eighth district of the State of Virginia, protesting against the passage of House bill 78, the compulsory Sunday observance bill; to the Committee on the District of Columbia.

5076. Also, petition of M. J. Riley and other residents of the eighth district of the State of Virginia, protesting against the passage of House bill 78, the compulsory Sunday observance bill; to the Committee on the District of Columbia.

5077. Also, petition of K. M. Kendrick and other residents of the eighth district of the State of Virginia, protesting against the passage of House bill 78, the compulsory Sunday observance bill; to the Committee on the District of Columbia.

5078. Also, petition of Mrs. C. E. Gheen, Alma D. Poole, and other residents of the eighth district of the State of Virginia, protesting against the passage of House bill 78, the compulsory Sunday observance bill; to the Committee on the District of Columbia.

5079. Also, petition of I. N. Rich, Mrs. I. N. Rich, Ruth Rich, Mrs. R. R. Rich, R. R. Rich, and M. E. Rich, residents of the eighth district of the State of Virginia, protesting against the passage of House bill 78, the compulsory Sunday observance bill; to the Committee on the District of Columbia.

5080. By Mr. MORIN: Petition of Masters, Mates, and Pilots Association of America, Local No. 25, of Pittsburgh, Pa., opposing favorable report on House bill 11137, on basis of resolution passed at regular meeting on March 6; to the Committee on the Merchant Marine and Fisheries.

5081. By Mr. O'CONNELL: Petition of the International Seamen's Union of America, favoring the Senate amendment to the appropriation for the Shipping Board providing that none of the appropriation shall be used to sustain the sea-service bureau; to the Committee on Appropriations.

5082. Also, petition of the joint legislative committee of the radio industry, Washington, D. C., favoring Federal Radio Commission be extended until March 15, 1929, that the appointment of members of the commission be for terms provided in the radio act of 1927; that the principle of equitable distribution of radio service established in the radio act of 1927 be maintained without adding the arbitrary requirement of a physical equality of distribution which would be without precedent in legislative history; to the Committee on the Merchant Marine and Fisheries.

5083. Also, petition of the New York Photo Engravers' Union, No. 1, New York City, favoring the passage of the Shipstead-LaGuardia bill (S. 1482) and the Cooper-Hawes bill (S. 1940 and H. R. 7729); to the Committee on Labor.

5084. By Mr. OLDFIELD: Petition of Louisa Hickman et al., Denmark, Ark., urging favorable action of proposed increase of pensions of veterans of Civil War and their widows; to the Committee on Invalid Pensions.

5085. By Mr. ROMJUE: Petition of E. S. Binger, W. A. Tweed, et al., in behalf of the Liberty Farm Club, of Williamstown, Mo., for a farm relief bill with an equalization fee; to the Committee on Agriculture.

5086. By Mr. SELVIG: Petition of Joe Rapacz and 19 farmers and residents of Polk County, Minn., protesting against the passage of House bill 6465, the purpose of which is to place Mexico and Canada on a quota basis; to the Committee on Immigration and Naturalization.

5087. Also, petition of Joseph A. Roesch and three farmers and residents of Ada, Minn., protesting against the passage of House bill 6465, the purpose of which is to place Mexico and Canada on a quota basis; to the Committee on Immigration and Naturalization.

5088. Also, petition of D. B. Smiley and 39 farmers and residents of Polk County, Minn., protesting against the passage of House bill 6465, the purpose of which is to place Mexico and Canada on a quota basis; to the Committee on Immigration and Naturalization.

5089. Also, petition of A. A. Dragseth and six farmers and residents of Eldred, Minn., protesting against the passage of House bill 6465, the purpose of which is to place Mexico and Canada on a quota basis; to the Committee on Immigration and Naturalization.

5090. Also, petition of Lewis E. Sande and eight farmers and residents of Alvarado, Minn., protesting against the passage of House bill 6465, the purpose of which is to place Mexico and Canada on a quota basis; to the Committee on Immigration and Naturalization.

5091. Also, petition of Dick Wibbels and 18 farmers and residents of Mahanomen County, Minn., protesting against the passage of House bill 6465, the purpose of which is to place Mexico and Canada on a quota basis; to the Committee on Immigration and Naturalization.

5092. By Mr. SINNOTT: Petition of 170 citizens of Pendleton, Oreg., protesting against enactment of House bill 78, the Lankford bill, or similar compulsory Sunday observance legislation; to the Committee on the District of Columbia.

5093. By Mr. STRONG of Pennsylvania: Petition of citizens of Hawthorn, Pa., and vicinity, in favor of increasing the rates of pension for Civil War veterans and their widows; to the Committee on Invalid Pensions.

5094. By Mr. SUMMERS of Washington: Petition signed by John F. Erickson and 122 others of Yakima, Wash., protesting against the enactment of compulsory Sunday observance legislation; to the Committee on the District of Columbia.

5095. Also, petition signed by Ven Harvey and seven others of Prescott, Wash., protesting against the enactment of compulsory Sunday observance legislation; to the Committee on the District of Columbia.

5096. By Mr. SWING: Petition of citizens of San Diego, Calif., protesting against compulsory Sunday observance laws; to the Committee on the District of Columbia.

5097. Also, petition of citizens of National City, Calif., urging passage of Civil War pension bill providing relief for needy and suffering veterans and widows; to the Committee on Invalid Pensions.

5098. Also, petition of citizens of Orange, Calif., urging passage of Civil War pension bill providing relief for needy and suffering veterans and widows; to the Committee on Invalid Pensions.

5099. Also, petition of residents of San Diego, Calif., urging immediate legislation increasing the pensions of Civil War veterans and the widows of such veterans; to the Committee on Invalid Pensions.

5100. By Mr. TAYLOR of Colorado: Petition from the women voters of Grand Junction, Colo., urging the passage of the alien deportation bill (H. R. 10078); to the Committee on Immigration and Naturalization.

5101. By Mr. WASON: Petition of 47 residents of Keene, N. H., protesting against the passage of House bill 78, known as the Sunday closing bill; to the Committee on the District of Columbia.

5102. By Mr. WELCH of California: Petition submitted by United States Employees Association, San Francisco, Calif., favoring the passage of the Welch bill (H. R. 6518), to reclassify and increase the salaries of the Federal employees; to the Committee on the Civil Service.

5103. By Mr. WHITE of Colorado: Petition of sundry citizens of Denver, Colo., protesting against the enactment of the Lankford Sunday observance bill; to the Committee on the District of Columbia.

5104. By Mr. WYANT: Petition of Department of Pennsylvania, Veterans of Foreign Wars of the United States, indorsing plan of President Coolidge for an adequate United States Navy; to the Committee on Naval Affairs.

5105. Also, petition of 550 members of First Presbyterian Church, Irwin, Pa., favoring passage of Lankford Sunday rest bill for the District of Columbia; to the Committee on the District of Columbia.

5106. Also, petition of Pennsylvania State Chamber of Commerce, by George E. Foss, general secretary, protesting against Sirovich bill (H. R. 6511); to the Committee on Labor.

SENATE

THURSDAY, March 8, 1928

(Legislative day of Tuesday, March 6, 1928,

The Senate reassembled at 12 o'clock meridian, on the expiration of the recess.

PETITIONS AND MEMORIALS

Mr. EDGE presented a communication from Mary P. Shelton, president of the Leonia Women's Republican Club, of Leonia, N. J., with accompanying resolutions unanimously adopted by that club, which were referred to the Committee on Naval Affairs and, on request of Mr. EDGE, ordered to be printed in the RECORD, as follows:

127 GLENWOOD AVENUE,
Leonla, N. J., March 3, 1928.

Hon. WALTER E. EDGE,
Washington, D. C.

DEAR SENATOR EDGE: I have the honor to present to you a set of resolutions passed by the Leonia Women's Republican Club.

It is a special pleasure to us to stay the hand of those in whom we have such confidence.

Most respectfully,

(Mrs. W. B. S.) MARY P. SHELTON,
President Leonia Women's Republican Club.

Resolution unanimously adopted by Leonia Women's Republican Club
February 24, 1928

Whereas the members of the Leonia Women's Republican Club assembled at their regular meeting Friday, February 24, 1928, discussed the naval appropriation bill, approved by the President of the United States and by the Secretary of the Navy; and

Whereas an organized movement to prevent the passage of this measure has petitioned our representatives against this program of peace-time security which would bring our common defense up to the 5-5-3 ratio agreed upon at the Washington conference; and

Whereas we believe it to be the sworn duty of our Representatives to uphold our constitutional defense and protection against insurrection from within and invasion from without, from piracy upon the high seas; to protect our coasts and ports; to protect our nationals at home and abroad, and to insure the right of asylum to our nationals in other countries; and

Whereas it is the belief of the members of the Leonia Women's Republican Club that the program of pacifists to make us defenseless under the guise of some idealistic leadership is the direct mandate of enemies to constitutional government and a conspiracy to make us a defenseless nation against stronger nations, thereby weakening our independent position gained after 150 years of successful government under the plan laid down by Washington, Jefferson, Madison, and Jay; and

Whereas the members of the Leonia Women's Republican Club wish to indorse and support the obviously essential program approved by the administration for our peace needs as well as for war insurance: Be it

Resolved, That this organization send to the President of the United States and to the Secretary of the Navy, as well as to Senators WALTER E. EDGE, EDWARD I. EDWARDS, and Congressman RANDOLPH PERKINS our earnest supplication that they assure our security by supporting the naval appropriation bill; be it further

Resolved, That at this time we voice our earnest approval and appreciation of positions assumed by our Representatives in the past for our welfare and general protection in other measures; be it further

Resolved, That a copy of this resolution be incorporated in the reports and minutes of this organization and sent to the press.

Mr. METCALF presented a communication in the nature of a memorial from the Governors of the States of Connecticut, Rhode Island, Vermont, and New Hampshire, which was ordered to lie on the table and to be printed in the Record, as follows:

To the Congress of the United States:

As governors of some of the States of the United States which are to be affected by the passage by Congress of the Hawes bill now pending in the Senate and the Cooper bill now pending in the House of Representatives, we urge your earnest consideration of the advisability of enacting into law the principle contained in these measures.

We believe that the passage of this legislation may be the entering wedge to the adoption of such laws as will ultimately result in permitting a State to determine with what States it will carry on interstate business, a principle which should not be extended beyond the scope of the police power.

Further than this, we feel that every State would be obliged to pass statutes prohibiting the sale of the goods covered by such legislation for its own protection, thus completely destroying the market for such goods and bringing about a condition of unemployment in prisons and correctional institutions to the serious injury of the inmates thereof and a great increase in expense of maintenance of such institutions.

It is therefore our opinion that this legislation ought not to pass.

Respectfully submitted.

JOHN H. TRUMBULL,
Governor of Connecticut.
NORMAN S. CASE,
Governor of Rhode Island.
JOHN E. WEEKS,
Governor of Vermont.
H. N. SPAULDING,
Governor of New Hampshire.

Mr. FESS presented petitions of sundry citizens of Lima, Downingtown, and Ada and vicinity, all in the State of Ohio, praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which were referred to the Committee on Pensions.

Mr. WALSH of Montana presented a petition of sundry citizens of Forsyth and Rosebud County, Mont., praying for the prompt passage of legislation granting increased pensions to Civil War veterans and their widows, which was referred to the Committee on Pensions.

Mr. DILL presented petitions of sundry citizens of Seattle and Everett, in the State of Washington, praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which were referred to the Committee on Pensions.

Mr. FRAZIER presented the petition of Ruth Young and 18 other citizens of Moffitt, N. Dak., praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which was referred to the Committee on Pensions.

Mr. BRUCE presented a petition of sundry citizens of Hagerstown, Md., praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which was referred to the Committee on Pensions.

Mr. WILLIS presented petitions of sundry citizens of Columbus, Downingtown, Willard, and Meigs County, all in the State of Ohio, praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which were referred to the Committee on Pensions.

Mr. CAPPER presented a petition of sundry citizens of Lincoln, Kans., praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which was referred to the Committee on Pensions.

Mr. DENEEN presented sundry petitions numerous signed by citizens of the State of Illinois, praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which were referred to the Committee on Pensions.

He also presented a memorial of members of the faculty and students of Mount Morris College, Mount Morris, Ill., remonstrating against adoption of the proposed naval building program, which was referred to the Committee on Naval Affairs.

He also presented memorials numerous signed by citizens of the State of Illinois, remonstrating against the passage of legislation providing for compulsory Sunday observance in the District of Columbia, which were referred to the Committee on the District of Columbia.

Mr. BLAINE presented a memorial of sundry citizens of Antigo, Wis., remonstrating against the passage of legislation providing for compulsory Sunday observance in the District of Columbia, which was referred to the Committee on the District of Columbia.

He also presented petitions of sundry citizens of the State of Wisconsin, praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which were referred to the Committee on Pensions.

Mr. COPELAND presented a letter, in the nature of a petition, from the Erie County (N. Y.) Committee, the American Legion, praying for the passage of legislation to establish a national institute of health, which was referred to the Committee on Commerce.

He also presented a letter, in the nature of a petition, from the Erie County (N. Y.) Committee, the American Legion, praying for the passage of the bill (S. 2370) to amend section 24 of the immigration act of 1917, which was referred to the Committee on Immigration.

He also presented petitions of sundry citizens of Woodstock and Horseheads, in the State of New York, praying for the passage of legislation granting increased pensions to Civil War veterans and their widows, which were referred to the Committee on Pensions.

He also presented a telegram from the King Manufacturing Co., of Buffalo, N. Y., favoring the "continuance of the Federal Radio Commission present allocation of stations geographically," which was referred to the Committee on Interstate Commerce.

He also presented a telegram from the Paulist Fathers, Radio Station WLWL, of New York, N. Y., protesting against the passage of pending radio legislation with amendment for equal allocation to each of the five zones, which was referred to the Committee on Interstate Commerce.

He also presented a telegram signed by Harold O. Quick, manager broadcasting station WSYR, of Syracuse, N. Y., stating "we believe highest power should be assigned to stations with best programs and powerful stations should be located where best talent, material, and educational features are easily available and where the tremendous financial outlay necessary may show some reasonable return," which was referred to the Committee on Interstate Commerce.

Mr. NORBECK presented petitions numerous signed by citizens of Watertown, S. Dak., praying for the passage of legislation establishing a national board to censor magazines and books, which were referred to the Committee on Interstate Commerce.

REPORTS OF COMMITTEES

Mr. McNARY, from the Committee on Agriculture and Forestry, to which was referred the bill (S. 3555) to establish a Federal Farm Board to aid in the orderly marketing and in the control and disposition of the surplus of agricultural commodities in interstate and foreign commerce, reported it without amendment and submitted a report (No. 500) thereon.

Mr. BRATTON, from the Committee on Indian Affairs, to which were referred the following bills, reported them each without amendment and submitted reports thereon:

A bill (S. 3007) to authorize the Secretary of the Interior to issue a patent to the Bureau of Catholic Indian Missions for a certain tract of land on the Mescalero Reservation, N. Mex. (Rept. No. 501); and

A bill (H. R. 8824) to provide for the protection of the watershed within the Carson National Forest from which water is obtained for the Taos Pueblo, N. Mex. (Rept. No. 502).

Mr. ASHURST, from the Committee on Indian Affairs, to which was referred the bill (S. 3026) authorizing the construction of a fence along the east boundary of the Papago Indian Reservation, Ariz., reported it without amendment and submitted a report (No. 503) thereon.

Mr. METCALF, from the Committee on Interstate Commerce, to which was referred the joint resolution (S. J. Res. 99) to amend joint resolution directing the Interstate Commerce Commission to take action relative to adjustments in the rate structure of common carriers subject to the interstate commerce act, and the fixing of rates and charges, reported it without amendment and submitted a report (No. 504) thereon.

Mr. NORBECK, from the Committee on Public Lands and Surveys, to which was referred the bill (S. 2828) to amend the act of April 25, 1922, as amended, entitled "An act authorizing extensions of time for the payment of purchase money due under certain homestead entries and Government-land purchases within the former Cheyenne River and Standing Rock Indian Reservations, N. Dak. and S. Dak.," reported it with an amendment and submitted a report (No. 505) thereon.

ENROLLED BILLS PRESENTED

Mr. GREENE, from the Committee on Enrolled Bills, reported that on March 8, 1928, that committee presented to the President of the United States the following enrolled bills:

S. 700. An act authorizing the Secretary of the Interior to execute an agreement with the middle Rio Grande conservancy district providing for the conservation, irrigation, drainage, and flood control for the Pueblo Indian lands in the Rio Grande Valley, N. Mex., and for other purposes;

S. 771. An act providing for the gift of the U. S. S. *Dispatch* to the State of Florida;

S. 1705. An act authorizing the Court of Claims to render judgment in favor of the administrator of or collector for the estate of Peter P. Pitchlynn, deceased, instead of the heirs of Peter P. Pitchlynn, and for other purposes;

S. 2342. An act providing for a per capita payment of \$25 to each enrolled member of the Chippewa Tribe of Minnesota from the funds standing to their credit in the Treasury of the United States; and

S. 2902. An act authorizing the States of Wisconsin and Michigan to construct, maintain, and operate a free highway bridge across the Menominee River at or near Marinette, Wis.

BILLS INTRODUCED

Bills were introduced, read the first time, and, by unanimous consent, the second time, and referred as follows:

By Mr. McNARY:

A bill (S. 3556) to insure adequate supplies of timber and other forest products for the people of the United States, to promote the full use for timber growing and other purposes of forest lands in the United States, including farm wood lots and those abandoned areas not suitable for agricultural production, and to secure the correlation and the most economical conduct of forest research in the Department of Agriculture, through research in reforestation, timber growing, protection, utilization, forest economics, and related subjects, and for other purposes; to the Committee on Agriculture and Forestry.

By Mr. NEELY:

A bill (S. 3557) granting an increase of pension to Leslie Harding; to the Committee on Pensions.

A bill (S. 3558) authorizing Point Pleasant Henderson Bridge Co., its successors and assigns, to construct, maintain, and operate a bridge across the Kanawha River at or near Point Pleasant, W. Va.; to the Committee on Commerce.

By Mr. WATSON:

A bill (S. 3559) to create a special highway fund from the proceeds of the sale of surplus war material, highway equipment, and supplies to the Government of France; to the Committee on Post Offices and Post Roads.

By Mr. MAYFIELD:

A bill (S. 3560) authorizing the issuance of service medals to officers and enlisted men of the brigade of Texas Infantry organized under authority from the War Department during the World War, and authorizing an appropriation therefor; and further authorizing the wearing by such officers and enlisted

men on occasions of ceremony of the uniform lawfully prescribed to be worn by them during their service; to the Committee on Military Affairs.

By Mr. WALSH of Massachusetts:

A bill (S. 3561) to require contractors and subcontractors engaged on public works of the United States to give certain preferences in the employment of labor; to the Committee on Education and Labor.

By Mr. WAGNER:

A bill (S. 3562) to establish a landing field for aircraft at Governors Island, N. Y., and for other purposes; to the Committee on Military Affairs.

By Mr. REED of Pennsylvania:

A bill (S. 3563) granting an increase of pension to Emily R. Albee (with accompanying papers); to the Committee on Pensions.

By Mr. STEPHENS:

A bill (S. 3564) for the relief of J. A. Teat, F. E. Leach, and J. L. McMillan; to the Committee on Claims.

By Mr. BLAINE:

A bill (S. 3565) to provide compensation for disability or death resulting from injury to employees in certain employments in the District of Columbia, and for other purposes; to the Committee on the District of Columbia.

By Mr. COPELAND:

A bill (S. 3566) conferring jurisdiction upon the United States Court for the Southern District of New York to hear and determine the claim of the owner of the French auxiliary bark *Querville* against the United States, and for other purposes;

A bill (S. 3567) conferring jurisdiction upon certain courts of the United States to hear and determine the claim by the owner of the steamship *San Tirso* against the United States, and for other purposes; and

A bill (S. 3568) conferring jurisdiction upon certain courts of the United States to hear and determine the claim by the owner of the steamship *W. I. Radcliffe* against the United States, and for other purposes; to the Committee on Claims.

By Mr. SHEPPARD:

A bill (S. 3569) to equalize the pay of certain classes of officers of the Regular Army; to the Committee on Military Affairs.

By Mr. CARAWAY:

A bill (S. 3570) for the relief of Claude L. Pyle; to the Committee on Claims.

By Mr. TYSON:

A bill (S. 3571) granting the consent of Congress to the county court of Roane County, Tenn., to construct a bridge across the Emory River at Suddaths Ferry, in Roane County, Tenn.; to the Committee on Commerce.

FLOOD CONTROL

Mr. JONES. Mr. President, I feel I should make a brief statement about the flood control bill reported to the Senate by the Commerce Committee. Telegrams are sent out and editorials written opposing the bill based upon something supposed to be in the bill, which is, in fact, expressly negated by the terms of the bill. It is asserted that the bill provides for a commission to investigate the capacity of States, districts, and communities to contribute toward the cost of flood-control works and to determine the amount of such contributions. No commission is provided in the bill to do anything of this kind. On the contrary, section 2 of the bill expressly declares that by the expenditure of nearly \$300,000,000 the communities embraced in the project adopted have largely complied with the principle of contribution. Practically all the contribution called for is the payment of one-third of the cost of bringing the main levees up to the 1914 standard and the furnishing of rights of way for levees along the main river where the same have not already been provided. This latter condition can be met at very slight expense. The Chief of Engineers estimates that one-third of the cost of bringing the main levees up to the 1914 standard is about \$4,000,000 if the plan of the Chief of Engineers is adopted. If the plan of the Mississippi River Commission is adopted, covering a portion of the tributaries, this cost will be about \$14,000,000. When the magnitude of the work is considered, such contributions are very small.

A board is provided in the bill, but that board is to consider only the engineering differences between the plan of the engineers and the plan of the Mississippi River Commission and has nothing whatever to do with the matter of contributions or the economic phases of the situation.

MESSAGE FROM THE HOUSE

A message from the House of Representatives, by Mr. Haligan, one of its clerks, announced that the House had passed

without amendment the bill (S. 1531) authorizing the Secretary of Agriculture to sell the Weather Bureau station known as Mount Weather, in the counties of Loudoun and Clarke, in the State of Virginia.

The message also announced that the House had passed the following bills and joint resolutions, in which it requested the concurrence of the Senate:

H. R. 53. An act to provide for the collection and publication of statistics of tobacco by the Department of Agriculture;

H. R. 7459. An act to authorize the appropriation for use by the Secretary of Agriculture of certain funds for wool standards, and for other purposes;

H. R. 9495. An act to provide for the further development of agricultural extension work between the agricultural colleges in the several States receiving the benefits of the act entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," approved July 2, 1862, and all acts supplementary thereto, and the United States Department of Agriculture;

H. R. 9830. An act authorizing the Great Falls Bridge Co., its successors and assigns, to construct, maintain, and operate a bridge across the Potomac River at or near the Great Falls;

H. R. 11026. An act to provide for the coordination of the public-health activities of the Government, and for other purposes;

H. R. 11579. An act relating to investigation of new uses of cotton;

H. J. Res. 140. Joint resolution to amend sections 1 and 2 of the act of March 3, 1891; and

H. J. Res. 215. Joint resolution to authorize the Secretary of Agriculture to accept a gift of certain lands in Clayton County, Iowa, for the purposes of the upper Mississippi River wild life and fish refuge act.

CALL OF THE ROLL

Mr. FLETCHER obtained the floor.

Mr. KING. Mr. President, I suggest the absence of a quorum.

The VICE PRESIDENT. The clerk will call the roll.

The Chief Clerk called the roll, and the following Senators answered to their names:

Ashurst	Ferris	La Follette	Sheppard
Barkley	Fess	McKellar	Shipstead
Bayard	Fletcher	McLean	Shortridge
Bingham	Frazier	McMaster	Simmons
Black	George	McNary	Smith
Blaine	Gerry	Mayfield	Smoot
Blease	Glass	Metcalf	Steck
Borah	Gooding	Neely	Steiwer
Bratton	Gould	Norbeck	Stephens
Brookhart	Greene	Norris	Swanson
Broussard	Hale	Nye	Thomas
Bruce	Harris	Oddie	Tydings
Capper	Harrison	Overman	Tyson
Caraway	Hayden	Philpotts	Wagner
Copeland	Hedin	Pine	Walsh, Mass.
Couzens	Howell	Pittman	Walsh, Mont.
Curtis	Johnson	Ransdell	Warren
Cutting	Jones	Reed, Pa.	Waterman
Deneen	Kendrick	Robinson, Ark.	Watson
Dill	Keyes	Sackett	Wheeler
Edge	King	Schall	Willis

Mr. JONES. I desire to announce that the Senator from Vermont [Mr. DALE] is detained on official business.

The VICE PRESIDENT. Eighty-four Senators having answered to their names, a quorum is present. The Senator from Florida [Mr. FLETCHER] is entitled to the floor.

Mr. SMOOT. Will the Senator from Florida yield to me for a few moments?

Mr. FLETCHER. I yield to the Senator from Utah.

ALLEGED REFUND OF TAXES TO WILLIAM RANDOLPH HEARST

Mr. SMOOT. Mr. President, I desire to read a letter into the RECORD to correct a certain statement which was made by the Senator from Alabama [Mr. HEFLIN], and I want to call his attention to the letter. The letter is dated March 5, 1928, and addressed to myself, from the Secretary of the Treasury. Mr. Mellon:

TREASURY DEPARTMENT,
Washington, March 5, 1928.

Hon. REED SMOOT,
United States Senate.

MY DEAR SENATOR: Under date of January 11, 1928, Senator HEFLIN addressed a communication to me in which he inquired what amounts of taxes, if any, had been refunded to William Randolph Hearst since I had become Secretary of the Treasury.

On January 16, 1928, I addressed the following communication to Senator HEFLIN:

"In your letter of January 11 you inquire what amounts of taxes, if any, have been refunded to William Randolph Hearst since I became Secretary of the Treasury.

"You are advised that no refunds of taxes have been made to Mr. Hearst during that period."

It appears appropriate to bring this to your attention in view of the remarks of Senator HEFLIN appearing on page 3348 of the CONGRESSIONAL RECORD of February 21, 1928, as follows:

"The corporations in the main seem to be the ones who are to get it. I notice a refund is provided to the Washington News of over \$300,000, and this is a presidential year! There are other newspapers which have had refunds in this presidential year involving thousands and tens of thousands of dollars. I understand Mr. Hearst had a refund of \$600,000 or \$700,000 in the last two or three years, and that he and Mr. Mellon have become exceedingly warm friends."

It is perhaps of interest to you to know that the Washington Daily News, to which Senator HEFLIN probably refers, received no refund from the Treasury Department. It is probable that the Senator has been misinformed concerning the case. Certainly in view of the letter addressed to the Senator on January 16, there is no basis for the statements made on February 21 in respect of the alleged refund to Mr. Hearst.

It occurs to me that you may wish to correct any impression that the erroneous statements by Senator HEFLIN may have left in the minds of his colleagues and have the RECORD show the true facts.

Sincerely yours,

A. W. MELLON,
Secretary of the Treasury.

Mr. HEFLIN. Mr. President, the letter of the Secretary of the Treasury does not say that he has not refunded taxes to any newspaper or other interest connected with Mr. Hearst. I have heard it talked around the Capitol, and other Senators have, I take it, that a large refund had been made to the Hearst interests. It has been talked for a month that it was the cause of the warm friendship which sprang up between the Secretary of the Treasury and Mr. Hearst. Of course, personally, I do not know as to that, but the letter does not cover that situation.

Now as to the Washington News, the press dispatches at the time this refund was given out carried that item. I think I have it in my office. Some one has told me that the refund was to some other News and that it was a mistake on the part of the reporters here in naming it the Washington News. I based my information on that statement in the press and on the other statements which had gone the rounds here.

I shall address another letter to Mr. Mellon, in which I shall inquire more in detail as to certain tax refunds. He has refunded over a billion dollars in taxes since he has been Secretary of the Treasury, and the Senate has not obtained the names of any persons to whom taxes have been refunded, except the list for which I called, which was sent here in response to a resolution adopted by the Senate after he declined to send the names without action by the Senate. I am going to ask him for more detailed information. Then, if I can not get it, I am going to ask the Senate to adopt another resolution.

Mr. SMOOT. Mr. President, I take it that the Secretary of the Treasury objected more particularly because in his letter to the Senator from Alabama on January 16 he made the statement that there was no refund made to the Hearst interests. Then, after that, on February 21 the Senator from Alabama made the statement which the Secretary has quoted in his letter. I suppose that is the reason why the Secretary of the Treasury finds fault with the Senator from Alabama.

Mr. HEFLIN. Mr. President, with regard to that, I desire to say that I have never seen such a letter. I wish to say, however, that since I spoke in this Chamber on the 18th of January on the Hearst-Catholic-Mexican scandal I have received thousands of letters, and there are two or three thousand of them in my office which I have not yet had an opportunity to read. Those letters come from every State in the Union, indorsing my position and commending my course, and it may be that that letter is there. I am going through those letters just as fast as I can, but, with my other duties here, it has been impossible to read them all. There are probably 3,000 which I have not read; it may be that that letter is in my office, but I have never seen it.

Mr. SMOOT. The Secretary of the Treasury quotes from his letter of January 16, I will say to the Senator. Does the Senator say that he did not get that letter?

Mr. HEFLIN. I repeat, I have not seen the letter. It may be that the Secretary's letter is in my office, but my secretary has not called it to my attention. I have never seen it.

Mr. SMOOT. I have simply read the letter into the RECORD in order to have the situation clear so far as concerns the statement made by the Senator from Alabama.

Mr. HEFLIN. I am glad to have the Secretary of the Treasury state his side, I would not deny him that right; I want

him to do that. I am merely telling why I made the statement, and, I repeat, I am going to call on him for a more detailed statement about Mr. Hearst and his interests.

MUSCLE SHOALS

The Senate, as in Committee of the Whole, resumed the consideration of the joint resolution (S. J. Res. 46) providing for the completion of Dam No. 2 and the steam plant at nitrate plant No. 2 in the vicinity of Muscle Shoals for the manufacture and distribution of fertilizer, and for other purposes.

Mr. FLETCHER. Mr. President, I look upon the question of dealing with Muscle Shoals as one involving a very important problem. It seems to me that we ought to do something with the plants which we have erected there at very great expense to the people and ought to make that great resource useful to the country. Some 12 years ago we appropriated \$20,000,000 to start the enterprise. We have been waiting now year after year to determine what to do with that property. After spending some \$14,000,000 for the construction of nitrate plant No. 1, it has remained idle; and, after spending \$67,000,000 for the construction of nitrate plant No. 2, that remains idle. We spent some \$64,000,000 on the Wilson Dam—Dam No. 2 as it is now called—and we are utilizing that to some extent in producing electrical energy and are selling the current to the Alabama Power Co.

The people of the country, and especially the farmers of the country, are obliged to have fertilizer. It is not a question of buying fertilizer every 10 years or every 5 years or every 2 years; they are obliged to have fertilizer every year. That need grows and increases. The original purpose of the development of the enterprise at Muscle Shoals was to produce fixed nitrogen in time of war and to produce fertilizer in time of peace. That has been constantly in the mind of Congress, but nothing has been done about it. The plants at Muscle Shoals are rusting away; they are still idle and we are getting no return, practically, on the investment we have made there.

I am anxious that we should determine upon a definite, fixed policy with reference to this enterprise. I think we have waited long enough; that we have wasted time, just as we have wasted energy and wasted power at Muscle Shoals. We ought to determine the question without further delay. In general, I find myself in accord with the views expressed by the able Senators from Alabama.

I confess to very keen disappointment at the measure the Committee on Agriculture and Forestry has laid before us after its great study and labor in the solution of this problem. I digress here to pay tribute to the distinguished Senator from Nebraska [Mr. NORRIS] for whose honesty of purpose, for whose great ability, patriotism, and statesmanship I have the very highest estimate. The country is indebted to him for the public service which he has rendered and is rendering; but he brings in what he confessedly says is a "compromise" measure, which, in my judgment, does not get us anywhere toward the solution of this problem. It may be the best that the committee could, on account of difference of views, and so forth, bring out; but it seems to me it does not in its final analysis bring us very far, if anywhere, toward a solution of this question.

If I were in the place of the Government, with all its resources behind me, I would be disposed to take a broader and more comprehensive view of the whole Tennessee River situation than is attempted at this time. The possibilities for power development on that river are almost unlimited. The navigation of the river is a very important matter to be considered; and, of course, the production of fertilizer is of vast importance to our agricultural interests and, therefore, to the whole country.

If I had the power to do so and had the resources of the Government behind me, I would consider the whole Tennessee River, with its beautiful valleys and fertile lands and prosperous cities and growing communities everywhere from its source to where it empties into the Ohio River. It has its source up in the hills and mountains of Kentucky, Virginia, North Carolina, and eastern Tennessee. It flows in a southwesterly direction to Chattanooga and then turns southward until it gets close to Muscle Shoals; then it turns in a westerly direction and again in a northerly direction and empties into the Ohio River not a great distance from Cairo, Ill.

The Cumberland River likewise empties into the Ohio a few miles above where the Tennessee pours into that great river. There are possibilities of power development on the Cumberland yet untouched, unsurveyed, even unconsidered. But speaking with reference to the Tennessee, we find it is navigable with a 6-foot channel from the Ohio River to Wilson Dam. Dam No. 1 was built at a cost of some \$10,000,000. It develops no power; it serves no useful purpose except for naviga-

tion. Dam No. 2, or the Wilson Dam, forms a pool of some 16 miles, and the river is navigable up to that point. Passing from there, there is no navigation possible on the river of any continuous or worth-while sort. Here and there are navigable stretches at certain seasons only and with very light-draft boats.

The next dam on the river above Dam No. 2 is Hales Bar Dam, which was built some years ago at a cost of about \$11,000,000. In laying the foundations a subterranean stream was struck, and it became necessary to pour in trainload after trainload of cement in order to fill that up. I understand Mr. Brady's estate charged off something like \$7,000,000, and that property now, including the steam plant auxiliary to the water power, is owned, I think, by the Tennessee Power Co. or some subsidiary of that company. Power is transmitted for hundreds of miles from there. Another great purpose served by that dam was to make the river navigable at all seasons of the year with a 9-foot channel from there to Chattanooga and beyond. Under what is known as the Madden-Willis bill it is proposed to build Dam No. 3 north of Dam No. 2. That dam, if built, would make the river navigable for some 80 miles farther, and in that respect it would be an important improvement of navigation on the river.

The Government has adopted a policy of improving the rivers and harbors of the country for a period now extending over a hundred years; and it is entirely in line with the policy of the Government to build Dam No. 3 for navigation purposes as well as for the development of power that would follow as a consequence. Eighty miles of navigable channel would be produced by the building of Dam No. 3. It is estimated that it will cost \$32,500,000; perhaps it would cost more, but \$32,500,000 is the present estimate of the cost. With the building of that dam and probably one other dam at Gunter'sville on the river—which some power company is bound to build; in fact, application for a permit has already been filed for a site at Gunter'sville—we will have continuous navigation from the Ohio River up to Chattanooga and beyond.

Permits are being asked of the Power Commission for some other dams beyond Chattanooga on some sites already applied for, and those dams will be built by power companies if not by the Government. I should have no objection at all to having them built by the Government in the interest of navigation.

At what is called Shermans Dam a site has been selected, also at Sail Creek Dam, White Creek Dam, Marble Bluff Dam, and then we get up to Coulter Shoals Dam and up to Knoxville.

There is not any question at all in my mind but that those dams eventually will be built. Power companies are after them; but in every instance navigation will be promoted, and we shall finally have the Tennessee navigable up to Knoxville from the Ohio River.

A definite proposition, however, has been made by responsible parties for the building of the dam at Cove Creek, on the Clinch River, north of Knoxville and somewhat west. That dam is to be 225 feet high, and, according to the latest estimate of the Army engineers, is to cost \$37,000,000. A reservoir covering an area of some 75,000 acres will be provided for it. That dam, if built, and the reservoir created by it, would be an auxiliary power plant extending to Muscle Shoals. It would provide water that would create a navigable depth on the Tennessee River from that point on through all the locks and dams to Muscle Shoals. That auxiliary power would exist without any cost for coal or other appliances or labor. It would be a perpetual auxiliary power plant, useful for all the purposes of navigation and of power from that point to Muscle Shoals. Not only that, but it would make the Clinch River, a tributary of the Tennessee, navigable for some 80 miles, clear into the coal fields of east Tennessee.

So that by building Cove Creek dam and by building Dam No. 3 the Tennessee will be made navigable from the Ohio River to the coal fields of east Tennessee, and on by Knoxville. That would be a very great accomplishment. It would be a great achievement for the Government itself and for the public. To illustrate what it would mean, we are spending now on the Ohio River, in locks and dams which will be completed next year, over \$100,000,000 purely for navigation. Not one dollar of that money will ever come back to the Treasury. On the other hand, there is fastened upon the Government the cost of maintenance of those locks and dams, running through the centuries, probably amounting to at least \$100,000 every year. That is what we have done for the Ohio River for navigation alone. Here we propose to spend, to make the Tennessee navigable from the Ohio River to the east Tennessee coal fields and by Knoxville, on by Chattanooga and Muscle Shoals and the various towns and communities, \$106,000,000, or about that sum; and we have before us in the Willis bill, and the House has before it in the shape of the Madden bill, a proposition of the Air Nitrates Co. and the American Cyanamid Co. whereby

they covenant and agree to pay interest at the rate of 4 per cent on the entire cost of these improvements to the Government for 50 years, annually, and they also covenant and agree to create a sinking fund which will pay back to the Government at the rate of 4 per cent per annum, extending through a period of 100 years, an amortization that will return to it every dollar it has spent on these dams.

Mr. SHEPPARD. Mr. President, is this the Cyanamid Co.'s offer which the Senator is now discussing?

Mr. FLETCHER. I am referring to that as compared to what we have done for the Ohio River, where we have spent equally as much, never to get back 1 cent of it, but have burdened ourselves for all the future for the cost of maintenance. Here, we propose to make great improvements of equal value to navigation, and get back the entire cost of the improvements in the course of time, and 4 per cent interest on the money which we put into it. I submit that that is worth considering.

Mr. KING. Mr. President—

The PRESIDING OFFICER (Mr. SACKETT in the chair). Does the Senator from Florida yield to the Senator from Utah?

Mr. FLETCHER. I yield to the Senator.

Mr. KING. I want to ask the Senator whether the proposition of the Cyanamid Co. calls for the construction of the Cove Creek Dam, up on Clinch River, as well as Dam No. 3, or whether their proposition may not be segregated; whether they would not make it in the alternative, that they would pay so much if Dam No. 3 were completed, or an additional amount if both dams were completed, so that the Government would have its choice of building two dams at the cost which the Senator has indicated, or only one at a cost of approximately thirty or thirty-two million dollars.

Mr. FLETCHER. I am inclined to think the Senator is correct about that; but I confess that I have not studied in detail and carefully either of these bills, because they are not actually now before us. I have looked at their general outlines and the major propositions contained in them.

First, they propose to lease the property from the Government for a period of 50 years. I am not opposed to that, especially if the people who are to be the lessees are responsible people, know their business, and are willing to pay a reasonable rental charge for the property; and I think it would be advantageous for us to have some one in position to utilize these plants and get to making fertilizer for the farmers of this country without waiting 10 years for experiments, or for that matter, without waiting another day for experiments.

Mr. SIMMONS. Mr. President—

The PRESIDING OFFICER. Does the Senator from Florida yield to the Senator from North Carolina?

Mr. FLETCHER. I yield to the Senator, though I should like to proceed.

Mr. SIMMONS. I simply wanted to say that I am delighted to hear the Senator from Florida discuss this question, because in my judgment there is nobody in the Senate who has studied it more closely and understands it as thoroughly as does the Senator from Florida. I desire to ask the Senator from Florida, however, if in speaking about the proposition a few moments ago he referred to the Cyanamid Co.'s proposition which has been so vigorously supported by the two Senators from Alabama.

Mr. KING. And so bitterly assailed by the Senator from Nebraska.

Mr. FLETCHER. I was making reference to their proposal as embodied in the Madden bill and the Willis bill; but I propose to dwell a little more on that a little later.

Mr. SIMMONS. The reason why I ask the Senator is that I thought he spoke only about the amount that they proposed to pay the Government as rental but did not refer to any proposition to do anything for the production of fertilizer.

Mr. FLETCHER. I will get to that in a few minutes. The covenant is that they will produce at Muscle Shoals nitrate plant No. 2, first, 10,000 tons and on up, when they complete the necessary additions there, to 50,000 tons of fixed nitrogen every year. That would mean some 550,000 tons of ammonium phosphate or ammonium phosphate which would be utilized as fertilizer. Individual farmers can use this ammonium phosphate where they know how to mix it, perhaps here and there, with potash, and in other places, where they do not need the potash, with other filler; but the fertilizer factories are using it now, and of course the concern would be in position to make fertilizer at this plant to the amount of, as I say, some 550,000 tons annually.

That is one of their propositions. Coming back, however, to this situation on the Tennessee, the whole Tennessee River ought to be developed. Navigation ought to be considered; power ought to be considered; the manufacture of fertilizer

ought to be considered; and I was giving a brief outline of conditions as they exist.

The river, now navigable from the Ohio River with a 6-foot channel to Wilson Dam, with the building of these dams will become navigable on up to Knoxville and clear into the coal fields of east Tennessee. With the investments already made there we have Dam No. 1, which has cost some \$10,000,000; Dam No. 2, which has cost some \$64,000,000; nitrate plant No. 1, which has cost \$14,000,000; nitrate plant No. 2, which has cost \$67,000,000. Then add to that the cost of Dam No. 3, \$35,000,000, and Cove Creek Dam, \$37,000,000, and the problem of navigation and power development on the Tennessee will be solved, as well as the problem of manufacturing fertilizer.

All these plants are now idle. Plant No. 1 never has been used. It was built by White & Co. under the direction of the German Chemical Co., and is what they call a plant for producing nitrogen by the synthetic process. It never produced a pound of fixed nitrogen. Nitrate plant No. 2 never has been fully completed. It has a steam power-plant auxiliary, the whole costing some \$67,000,000, as I have said, idle, useless, rusting, and wasting away. The maintenance and upkeep costs to the Government of the United States at Dam No. 2 during 1927 were \$266,163.64. The maintenance and upkeep costs of the nitrate plant No. 1 from June 30, 1926, to June 30, 1927, were \$14,647; and the costs of upkeep and maintenance at nitrate plant No. 2 from June 30, 1926, to June 30, 1927, were \$58,177.

I do not know what it is costing to keep up our Waco quarry there, but probably three or four thousand dollars a year. But those are actual costs for caring for the property year by year.

Mr. SMITH. Does that \$58,000 take care of the sinking of certain parts of the foundation of nitrate plant No. 2 that they thought perhaps needed some support?

Mr. FLETCHER. It comes under the head of maintenance and upkeep.

Mr. SMITH. It was brought out before the committee that some part of it was insecure and that a certain amount had to be expended.

Mr. FLETCHER. These figures do not include that item. The amount of power sold to the Alabama Power Co. in 1927 was 556,105,000 kilowatt-hours. The revenue received was \$1,168,763.33. The total power that could have been developed there would have amounted to 1,051,000,000 kilowatt-hours, which, at the price received during the year, would have given a revenue of \$2,165,000.

The only purchaser of that power now is the Alabama Power Co., because they have the only transmission lines connecting with that plant. They take what power they choose to take. They do not consume the capacity production of the plant at all, which ought to be at least 160,000 horsepower. They take about 80,000 horsepower, and the Government is at the mercy of this power company because they have the only transmission lines leading from the plant.

That is the situation. We are spending for upkeep, this property is depreciating, we are charging no interest on our investment, making no use of these expensive plants for nitrate production, for fertilizer production, or anything of the kind, and getting scarcely enough revenue to take care of the property, with no chance, apparently, of getting any more from the sale of the power, because we have no transmission lines. We have to sell what the Alabama Power Co. is willing to buy, and at a price which they are willing to pay. Therefore, we are getting half the capacity of that plant in use at Dam No. 2.

Mr. President, what is proposed? We have before us Joint Resolution 46. Nitrate plant No. 2 has a capacity of 50,000 tons of fixed nitrogen annually. It is idle. Nitrate plant No. 1 is idle, as I have stated.

The report, Report No. 228, states:

The resolution here reported is a compromise, and has, for its principal object, the operation of Muscle Shoals upon the compromise plan set forth in the resolution for a sufficient length of time to demonstrate what is possible in the practical and economical method of cheapening fertilizer for the benefit of agriculture.

There we have stated frankly in this report the scope and purpose of Joint Resolution 46. It is almost amusing to read the title of this resolution. The joint resolution reads, "providing for the completion of Dam No. 2 and the steam plant at nitrate plant No. 2 in the vicinity of Muscle Shoals for the manufacture and distribution of fertilizer, and for other purposes," the very thing it does not do.

The provisions relate to the production and distribution of power. The nearest approach to the manufacture of fertilizer is work of an experimental character. It is said in the report, "for a sufficient length of time to demonstrate what is possible in the practical and economical method of cheapening fertilizer

for the benefit of agriculture." Suppose you call on the people of this country to stop eating until it can be demonstrated what is the best kind of food for them. Suppose you call on the farmers to stop growing crops next year until we can show them what kind of fertilizer is best for them to use. Suppose we discontinue building airplanes because improvements in engines and other parts are being constantly made. Suppose you insist that no more automobiles shall be made because a machine is about to be developed which will make gas or other fuel unnecessary and out of date. It is equally absurd to hold up the manufacture of fertilizers and materials for fertilizers because science is making progress and we expect modern methods will diminish their cost.

Do we need any demonstration that fertilizer is necessary and required by the agricultural interests of the country? Have we not been using fertilizer for years and years? Are not these people who propose now to lease this property actually manufacturing fertilizer? Why wait until we can experiment with some new process and await some new development?

The report says that we are to operate the Muscle Shoals plant on a compromise plan. What sort of a compromise plan? What do they mean by a compromise plan? In the meantime we ought to find a way to use what we have. If a responsible party will covenant to manufacture fertilizer there and furnish it to farmers at cost plus 8 per cent, and beginning right away, why would that not be a desirable thing? If such a lessee would spend \$30,000,000 of his own money in adding to the equipment of plant No. 2, and proceed as soon as that could be completed to manufacture fertilizer, would not that be better than letting the plant rust and rot, with no benefit to anyone? If it is possible for such a lessee to manufacture fertilizer there at no cost to the Government and supply it at one-half what it is now costing the farmers, why should not the opportunity be given?

This plant No. 2 is not complete. It can not now make fertilizer. There must be additions to it, new machinery, new equipment, and other things, which will cost some thirty to thirty-five million dollars, it is estimated.

In this Willis-Madden bill, touching again the high spots of it, the lessees agree, themselves, at their own expense and cost, and without any expense to the Government whatever, to make those additions, and to put the plant in condition and fully equipped to manufacture fertilizer.

Mr. BLACK. Mr. President—

The PRESIDING OFFICER (Mr. BRATTON in the chair). Does the Senator from Florida yield to the Senator from Alabama?

Mr. FLETCHER. I yield.

Mr. BLACK. I just want to call the Senator's attention to the fact that the statement is correct that the plant as now equipped can not manufacture fertilizer, and that neither the Norris resolution nor any other resolution that has been offered provides for an appropriation to put up machinery necessary to manufacture phosphoric acid, without which fertilizer can not be manufactured. Senators may call the bills fertilizer bills all they desire; unless there is an appropriation of some twenty-five or thirty million dollars to put up the additional equipment, they can not possibly manufacture fertilizer, except in small experimental lots.

Mr. FLETCHER. That is quite true.

Mr. SMITH. Mr. President, may I ask the Senator from Alabama if the cyanamide plant which is already there is ready to go on manufacturing cyanamide in an economic way, as compared with the claim that their processes have been developed so as to go beyond what plant No. 2 would do?

Mr. BLACK. I do not care to take up the time of the Senator from Florida—

Mr. FLETCHER. I am glad to have the Senator answer the question.

Mr. BLACK. The whole thing is this, that cyanamide is not the fertilizer the farmer wants. He wants a combination of nitrogen and phosphate so that later on he can, if he desires, mix them.

Mr. SMITH. I just wanted to know if they can produce cyanamide as cheaply and as efficiently there as at their plant at Niagara?

Mr. BLACK. Undoubtedly, with a small amount of additional equipment, the exact amount of which I do not know. But cyanamide is not fertilizer.

Mr. SMITH. I was not talking about that. The base is nitrogen, and that is mixed with phosphoric acid.

Mr. BLACK. It is one of the absolutely necessary elements, and I was calling attention to the fact that none of the so-called fertilizer bills here now, not a single one, provides an appropriation sufficient to manufacture fertilizer. We would be limited to the manufacture of cyanamide.

Mr. FLETCHER. That is quite true, and that is why I referred to the proposition of the lessees under the Madden-Willis bill. They propose to put in those additions and equip that plant for the manufacturing of fertilizer.

Mr. BLACK. That is a fact. I agree with the Senator in that.

Mr. FLETCHER. Which, of course, is a necessary and desirable thing if we are to make fertilizer. We do not need it to make cyanamide alone.

On page 2 of the report it is stated:

A nitrogen-fixation plant that would produce 40,000 tons of nitrogen a year, the same as that which could be produced by the operation of plant No. 2, would, under modern conditions and present scientific knowledge, cost about \$10,000,000; whereas the construction of nitrate plant No. 2 cost \$87,555,355.09.

The synthetic process is suggested here. We have two plants now. We can not make ammonium phosphate. Plant No. 1 is a synthetic-process plant. The fact is that material is now being made in the United States and can be used here. We export large quantities of this fertilizer material. There is a duty of \$5 a ton on cyanamide. It is made extensively in Germany, where they lack water power and must use coal.

If you want to help the farmer, you might begin by repealing that duty, perhaps. So with ammonium phosphate. That we need. That is what we must produce for fertilizer purposes. The duty on that is \$30 a ton. Germany is a large producer of that material and the duty keeps it out of the United States. Why not repeal the duty on ammonium phosphate if we propose to benefit agriculture?

The materials which I have been discussing are shown in the bottle which I hold in my hand at this time. The black material is cyanamide. It contains 28 per cent of ammonia or 23 per cent of nitrogen. At the bottom is Florida pebble phosphate, which contains from 68 to 70 per cent of bone phosphate of lime. At the top is ammo-phos, or ammonium phosphate, which contains 13 per cent of ammonia and 48 per cent of phosphoric acid. We can make cyanamide at Muscle Shoals just as they are making it at Niagara Falls. We can make ammonium phosphate at Muscle Shoals by making the necessary additions to nitrate plant No. 2, as mentioned. We have close by the pebble phosphate in Florida, an inexhaustible supply of it within close reach. We also have the hard-rock phosphate in Florida and in Tennessee.

Mr. KING. Mr. President, will the Senator yield?

Mr. FLETCHER. I yield.

Mr. KING. My understanding is that there is an abundance of phosphate within a very short distance of Muscle Shoals in Tennessee or in Alabama.

Mr. FLETCHER. That is true. It is a little different kind from the pebble phosphate and doubtless more difficult to crush and expensive to handle.

Mr. TYSON. That is true. It is phosphate rock.

Mr. FLETCHER. Yes; it contains phosphate. The combination of the phosphate and the cyanamide results from power being exerted and chemical action which finally results in what is really fertilizer or ammo-phos. That has in it no potash, but potash can easily be added, as can any other ingredients that might be required. Even the individual farmer could add those. In order to keep Muscle Shoals and manufacture the ammo-phos or ammonium phosphate there has to be some additional machinery and facilities which will cost, it has been estimated, from \$30,000,000 to \$35,000,000, and the proposed lessees say they are willing to put that in as a part of their contract.

Mr. SIMMONS. Mr. President, will the Senator yield?

The PRESIDING OFFICER. Does the Senator from Florida yield to the Senator from North Carolina?

Mr. FLETCHER. I yield.

Mr. SIMMONS. I would like to ask the Senator if there is anything in the theory which requires them to make the mixture at Muscle Shoals? May they not make the cyanamide at Muscle Shoals and make the mixture at some other point?

Mr. FLETCHER. Yes; they have to manufacture fertilizer, under that proposal, at Muscle Shoals.

Mr. SIMMONS. They have ultimately to manufacture fertilizer.

Mr. FLETCHER. Yes.

Mr. SIMMONS. But does it mean that they must manufacture all the ingredients of fertilizer at Muscle Shoals, or only one or two?

Mr. FLETCHER. They can make the cyanamide there, but they will have to bring in the phosphate to add to it in order to make the ammo-phos.

Mr. SIMMONS. I understood the Senator to say there is quite a duty upon ammonium phosphate?

Mr. FLETCHER. Yes.

Mr. SIMMONS. At the present time, as I understand, the Niagara Falls cyanamide plant is manufacturing cyanamide there and sending it over into New Jersey and there adding the phosphate.

Mr. FLETCHER. I think that is true. I think they make the cyanamide at Niagara and bring the phosphate up from Florida, and then they process it in New Jersey and combine the two and make the ammo-phos, three-quarters of which is sold in this country to fertilizer manufacturers and the rest shipped abroad. Some 52 foreign companies buy this material from them.

Mr. SIMMONS. They bring the cyanamide over from Niagara Falls and have to pay a duty on it?

Mr. SMOOT. No; cyanamide is on the free list.

Mr. FLETCHER. I think the Senator from Utah is wrong.

Mr. SMOOT. From what was the Senator reading?

Mr. FLETCHER. From the tariff act of 1922, paragraph 1583, which states that there are on the free list certain substances used chiefly for fertilizer, not specifically provided for, "Provided that no article specified by name in title 1 shall be free of duty." Turning to title 1, paragraph 7, we find ammonium carbonate, bicarbonate, $1\frac{1}{2}$ cents per pound, ammonium chloride $1\frac{1}{4}$ cents per pound, then we find ammonium phosphate $1\frac{1}{2}$ cents per pound and ammonium sulphate one-fourth cent per pound.

Mr. SIMMONS. That means that the cyanamide imported from Niagara Falls pays a duty, does it not?

Mr. FLETCHER. If I am correct in my understanding of it, I am not so certain about the duty on cyanamide. I have been informed that it does pay a duty of \$5 a ton, but I have read the law which specifies ammonium phosphate which must pay a duty of $1\frac{1}{2}$ cents per pound.

Mr. SIMMONS. We have plenty of that material in this country, have we not?

Mr. FLETCHER. We have the phosphate rock, an inexhaustible supply of phosphate, hard rock, and pebble phosphate, but we have to make the cyanamide. That has to be manufactured.

Mr. SIMMONS. And that is not manufactured by any concern in this country?

Mr. FLETCHER. Oh, yes.

Mr. SIMMONS. Cyanamide?

Mr. FLETCHER. Yes.

Mr. SIMMONS. No; not by any concern in this country. It is manufactured only at Niagara Falls.

Mr. FLETCHER. Cyanamide, I think, is made by the du Ponts at Charleston and Hopewell. The Cyanamid Co.'s plant is at Niagara Falls.

Mr. SIMMONS. Not cyanamide by name. They are manufacturing synthetic nitrogen, but not cyanamide such as they are making at Niagara Falls.

Mr. FLETCHER. This contains 23 per cent of nitrogen or 28 per cent of ammonia.

Mr. SIMMONS. The point I was making was this: If the Cyanamid Co. now produces its cyanamide in Canada and sends it over into New Jersey and converts it into fertilizer, where they can get the ammonium phosphate free, why, under their contract, could not that same company, by securing Muscle Shoals, make the cyanamide in this country free of duty and then get their phosphate also free of duty?

Mr. FLETCHER. Undoubtedly they could. That is what they would do.

Mr. SIMMONS. And that is probably what they are seeking to do. That is probably what the farmers of the country would not object to having them do if they thought it would reduce the price of fertilizer to the farmer. The farmers would think that by that process they were getting the benefit of some of the tariff duties that tended to put them upon a parity with the manufacturers of the country with reference to the advantages of the tariff.

Mr. TYSON. Mr. President, I want to ask the Senator if he knows under the terms of the bill how much fertilizer the lessee guarantees to manufacture?

Mr. FLETCHER. Under the terms of the Madden-Willis bill?

Mr. TYSON. Yes.

Mr. FLETCHER. A maximum of 50,000 tons of fixed nitrogen a year.

Mr. TYSON. Is that in the bill?

Mr. FLETCHER. It is.

Mr. TYSON. I have not seen the bill and I have not seen the report on the bill, but I have the report on the bill which

was introduced last year, and this is a résumé made by the committee:

This company is obligated to install equipment sufficient to produce fertilizers with a fixed nitrogen content of 10,000 tons. Its obligation to install additional equipment rests upon its ability to sell at a profit the entire output of the first 10,000 tons. It is allowed to charge in the cost of fertilizer every item of cost connected with the construction and operation of the nitrate properties, including each year 10 per cent of its own investment in new plants. The nitrate operations are intended to be distinct from the power operations, and will be self-supporting and profitable, providing fertilizer can be produced cheaply enough to be sold.

In other words, if they did not produce it cheaply enough to be sold, they would not have to sell another pound or ounce of fertilizer, and they would have all that power at their command and the plant could apparently be kept idle without having to produce another pound of fertilizer.

Mr. FLETCHER. I do not think that is the situation under the present measure.

Mr. BLACK. Mr. President, I think I can explain what the provision is, if the Senator from Florida will permit me.

Mr. FLETCHER. Certainly.

Mr. BLACK. It is provided first that they shall have equipment for 10,000 tons of fixed nitrogen. It provides that if at the expiration of the three years they have created in this country, through the farmers' board which is provided, through the Government agency, a sufficient demand for concentrated fertilizer, they shall increase to 20,000 tons. It then provides a like increase every three years, which would, of course, have to be gradual. It also provides that they must have on hand at all times and never under any circumstances less than one-fourth of the 50,000 tons, which would mean, at the present price of that product, about \$1,665,000 worth to be kept constantly on hand.

Mr. TYSON. What would happen if they could not sell it?

Mr. BLACK. They would have to hold it on hand and under their bill the amount that they made from the power which had been utilized in manufacturing nitrates would go to reduce the price of fertilizer and they would not get a dime of profit from it.

Mr. TYSON. What good would it do the farmer if we had 10,000 tons stored and he could not get it?

Mr. BLACK. I was explaining that. He would get that. The power which had been used in the manufacture of that fertilizer would then go to reduce the price of fertilizer, and the Cyanamid Co. would not get a dime of profit.

Mr. TYSON. That may be provided in the new measure, but it is not in the old one.

Mr. BLACK. It is in the Willis bill. I have read it with great care.

Mr. FLETCHER. The covenant in that bill is that they shall supply fertilizer to the farmers of the country at cost plus 8 per cent, so they are limited in that way.

If the charge that the proposed lessees are parts of a fertilizer trust, it is the first time in history that I ever heard of when a trust is willing to have its prices regulated and limited.

Mr. TYSON. Is that to be entirely independent of any money they get from power, or are they to use the money they get from power in reducing the cost of fertilizer? The last bill gave them all the money they could make out of the power, and then the fertilizer proposition was entirely an independent proposition and they were allowed to make 8 per cent on that, and if they could not make 8 per cent on it, all they had to do was to keep 10,000 tons on hand and never manufacture another ounce.

Mr. BLACK. They would have \$1,665,000 worth of this material on hand all the time, and whenever it was not sold, of course, they would lose the profit on it. So far as the power is concerned, the power that they receive for use in the manufacture of phosphoric acid and cyanamide, there would be very little left over and above that to distribute to the public.

Mr. TYSON. I want to take issue with the Senator on that. It shows there are only 90,000 horsepower required if we make 48,000 tons of cyanamide. This plant, when perfected, will have 610,000 horsepower. That will leave at least 500,000 horsepower free that they can use or sell.

Mr. FLETCHER. Does the Senator mean by using Dam No. 3 and Cove Creek Dam?

Mr. TYSON. All the propositions the Senator has been speaking about.

Mr. BLACK. I can give that exactly, I think, if the Senator from Florida will permit.

Mr. FLETCHER. Certainly.

Mr. BLACK. So far as the manufacture of fixed nitrogen is concerned, the Senator is approximately correct in the amount

of power it will take, which will be from 90,000 to 100,000 horsepower.

Mr. KING. To produce 50,000 tons?

Mr. BLACK. Fifty thousand tons of fixed nitrogen, and then they have only begun. The main amount of power which is needed to manufacture fertilizer is not in the manufacture of nitrogen, as has seemed to be the impression here, but in the manufacture of phosphoric acid. Without phosphoric acid we can not make fertilizer. It will take 180,000 horsepower to manufacture sufficient phosphoric acid in order to obtain the benefit of that plant. The primary power at Dam No. 2 is 67,000 horsepower.

Mr. TYSON. That is the very lowest that it gets down to?

Mr. BLACK. That is primary horsepower there. There used to be a branch that ran down below the home in which I lived which frequently went dry in the winter and sometimes in the summer. I have seen it running after a big rain when 50,000 horsepower could be derived from it; but we can not count that kind of power. We can only count the kind of power that is continuous.

Mr. TYSON. What about the steam plant?

Mr. BLACK. I am going to refer to the steam plant. The secondary power derived from the steam plant is used, but it involves a considerable cost. About 4 mills an hour is what it is figured to cost. Then, if during 95 per cent of the time, for instance, there is not enough hydroelectric power it is supplemented with steam power, which is purely temporary.

Let me refer to my figures which I received from the Government engineers. I have the complete figures here. If Cove Creek and Dam No. 3 were completed it would double the capacity of Dam No. 2; that is unquestioned. That would make for Dam No. 2 134,000 horsepower after completion of Cove Creek and Dam No. 3. Then, from Dam No. 3 it is estimated by the engineers that there can be obtained 27,000 horsepower. That would make for Dam No. 2 134,000 horsepower and for Dam No. 3, if developed by Cove Creek, 54,000 horsepower; and from the steam plant, if enlarged, 120,000 horsepower, or a total of 308,000 primary horsepower, including in that the steam plant.

The total amount of power necessary to produce fertilizer—and the farmer is not interested in cyanamide if he does not get fertilizer—is 280,000 horsepower, which would leave 28,000 horsepower.

As the Senator stated, Dam No. 3 and Cove Creek Dam, constructed by the Government, would be amortized over a period of years. In addition to that, interest would be paid on the amount of the investment at the rate of 4 per cent. That is the situation. There is not now and never has been—and no one can find where any responsible engineer has ever said that there would ever be—600,000 primary horsepower produced from those dams.

What I have said is from the statement obtained from the engineers. Therefore, there would be 28,000 horsepower more than required to produce the fertilizer, if the horsepower required for such production was 280,000. As a result, there would be less than half enough horsepower to supply the one city of Memphis.

Mr. SMOOT. Mr. President, will the Senator from Florida yield to me at this point?

Mr. FLETCHER. I yield.

Mr. SMOOT. I wish to call attention to the fact that when the last tariff bill was passed in 1922 crude phosphates were put upon the free list, as were also cyanide combinations, compounds, and so forth; in fact, all cyanides were placed on the free list, including potassium cyanide, salts of cyanide, and sodium cyanide. We took particular pains that the products entering into the manufacture of fertilizer used by the farmers of the country should be on the free list.

Mr. FLETCHER. This product, ammonium phosphate, is certainly used by the farmers, and ammonium phosphate certainly is not on the free list.

Mr. SMOOT. The Senator knows that refined ammonium phosphate is used also in medicine in this country, and in a great many different other ways.

Mr. FLETCHER. I know that phosphate is on the free list; I realize that. Morocco is sending it over here now as ballast free of duty and selling it here cheaper than it is sold over there, thus taking our market away from us.

Mr. SMOOT. So far as I am personally concerned, if there is a sufficient quantity produced in the United States—and I think there is—to warrant a duty, I would not object at all to such a duty being imposed. But the commodities which I have mentioned, including cyanamides, were placed on the free list because they are used in the manufacture of fertilizer. That provision was adopted in the House of Representatives and was

passed unanimously by the Senate, I think. The Senator from North Carolina will recall, I believe, that that was the case.

Mr. SIMMONS. Mr. President, if the Senator from Florida will pardon the interruption, I think we had quite a controversy in the Senate on that question. As I recall, there was a division of sentiment here, and it was a party division. I wish to look into it, however, for I am not quite sure.

Mr. FLETCHER. Mr. President, on this subject I wish to have inserted in the RECORD a letter dated September 8, 1926, addressed to Hon. LISTER HILL by W. P. Pickhardt, of New York. His company represents German concerns, I think. The letter bears on the subject we have discussed. It is evidently a public letter, and I have a right to use it, I take it, although I have not asked permission to use it.

Mr. SMOOT. What is the name of the writer?

Mr. FLETCHER. W. P. Pickhardt.

Mr. SMOOT. I know him very well.

The PRESIDING OFFICER (Mr. THOMAS in the chair). Without objection, the letter will be printed in the RECORD.

The letter is as follows:

KUTTROFF, PICKHARDT & CO. (INC.),
New York, September 8, 1926.

HON. LISTER HILL,
Room 356, Office Building, House of Representatives,
Washington, D. C.

DEAR MR. HILL: Confirming telephone conversation of yesterday, I give you the prices for several of our synthetic nitrogen fertilizers. These prices are for carload lots, f. o. b. cars at port, duty, if any, included.

Urea: \$160.50 per ton of 2,000 pounds, packed in single bags of 65 kos. gross for net. This price includes a duty of 35 per cent, making this product rather expensive for farm use, notwithstanding its excellent qualities.

Leunasalpeter: \$70 per ton of 2,000 pounds, packed in bags of 220½ pounds gross; 1 per cent tare allowed on single bags. This material comes in duty free as a fertilizer material under paragraph 1583.

Calcium nitrate: \$47.50 per ton of 2,000 pounds, packed in special bags of 220½ pounds gross for net. This also is a duty-free fertilizer material.

Our correspondents abroad also produce other fertilizers, as, for instance, ammonium phosphate, which is dutiable at \$30 per ton under paragraph 7, and, of course, can not be imported under this handicap.

The prices quoted are for southern ports. There is a difference in favor of northern ports of about 60 to 75 cents a ton for ocean freights.

I should be glad to discuss the fertilizer situation with you at some convenient time when you are in New York, or later when you have returned to Washington.

Yours truly,

W. P. PICKHARDT.

Mr. KING. Mr. President, it seems to me that there is some misunderstanding among some of us at least with respect to this proposition. I have understood that the paramount ingredient in connection with fertilizer was nitrogen. The claim has been made that we have been subject for years to the Chilean nitrate trust, if it may be so denominated, and that we were one of the few countries of the world that did not have nitrogen. It was said during the war that we must emancipate ourselves from this servitude growing out of our failure to produce nitrogen, and, therefore, the Muscle Shoals plant was constructed, primarily, to obtain nitrogen for munitions and, secondarily, nitrogen for the purpose of making fertilizer for the farmer.

The cyanamide process does obtain nitrogen from the atmosphere. That is the source of supply under the cyanamide process, as it is under the synthetic process. It seems to me that when we can get a company that does produce nitrogen, which is the basis largely if not entirely of our fertilizers, we ought to look with some degree of favor upon it, at least for the purpose of determining whether we will enter into some contractual relation with it, providing that corporation will relieve the Government of the expense of maintaining the plants, and will furnish nitrogen sufficient for munitions purposes when the Government needs them, and nitrogen for farmers to aid them in the cultivation of their crops.

I can not understand this apparent opposition to cyanamide. If cyanamide gets us nitrogen, and nitrogen is what we need, why not use the cyanamide process or use the corporations that produce cyanamide, because they can give us the basis of fertilizer?

Mr. FLETCHER. I think the Senator is entirely correct, and I am much obliged to him for the statement he has made. Of course, nitrogen is one of the necessary elements of plant food; everybody knows that; nitrogen, potash, and phosphate are the three elements required in fertilizer. Here we have

the nitrogen and the phosphate, and we can get the potash. I hope eventually we will be independent of foreign countries in respect to potash. There are some soils which do not need potash.

I did not intend, Mr. President, to get into a discussion of the merits of the Madden-Willis bill. I realize there is probably a great difference of opinion about it, and I do not care to open that up. H. R. 8305 is the House bill and S. 2786 is the Senate bill. However, so long as Senators seem to be interested in the matter, and, of course, primarily and with respect to the main proposition we ought to be interested, I think, I am going to ask the clerk to read a letter which was written by Representative MADDEN to the President. There seems to be some misconception which this letter may clear up. I have not consulted Mr. MADDEN about it or, of course, the President, but the letter seems to be public property. I have several copies of it, and I take it I am not guilty of any impropriety in asking that the letter be read here. Now, I ask the clerk to read it. The tables may be printed in the Record without reading. The letter will set forth the merits of the Madden bill.

The PRESIDING OFFICER. Without objection, the clerk will read.

The Chief Clerk read as follows:

HOUSE OF REPRESENTATIVES,
COMMITTEE ON APPROPRIATIONS,
Washington, D. C., February 13, 1928.

To the PRESIDENT,
Washington, D. C.

DEAR MR. PRESIDENT: In your reply to the official notification (August 14, 1924) of your nomination by the Republican National Convention, you made one statement that should never be forgotten:

"It is well for the country to have liberality in thought and progress in action, but its greatest asset is common sense. The people want a government of common sense."

I am writing you regarding my bill for the disposition of the Government's property at Muscle Shoals, because I believe that the taxpayers have a right to expect us to use this country's greatest asset of common sense in dealing with Muscle Shoals in order to save the assets of the Federal Treasury from incredible waste.

In my decisions about Muscle Shoals since the time I decided to address the House in favor of the acceptance of the Ford offer, February 3, 1923, I have earnestly tried to get at the facts, then follow the dictates of my conscience. I invite the most searching criticism of my bill now before the Committee on Military Affairs of the House, and shall never feel any acrimony toward those who fairly criticize it.

The only interest I have at Muscle Shoals is that of the Government, and in considering the Government's interest I shall try always to weigh the facts and fairly criticize all Muscle Shoals bills which in my judgment neglect the national defense, the welfare of agriculture, and Government economy.

In order, if possible, to correct some of the misunderstandings and misrepresentations of my bill by many who have not investigated the Muscle Shoals facts and by many others who persistently and purposely misrepresent these facts, I have undertaken to present the financial plan in my bill so clearly that it can not be misunderstood, even by those who do not wish to understand it. I send you three tables that speak for themselves.

Table No. 1 sets forth the financial plan in my bill on the same basis as the Panama Canal, 3 per cent bond issue. I have set forth in this table exactly how the Government stands each year for 50 years of the lease, and you will note that at the end of the fiftieth year there is a cash surplus of \$20,900,000 remaining in the Federal Treasury after paying 3 per cent on all expenditures by the Government chargeable to water power, to navigation (including all expenditures made at the Wilson Dam during the war)—3 per cent on every dollar spent by the United States at the Wilson Dam, Dam No. 3, and Cove Creek Dam.

In addition to this, there is the sinking fund for the amortization of all of the expenditures of the Government at all three dams in 100 years, which fund at the end of 50 years would have a cash value of \$10,800,000, which, added to the \$20,900,000 surplus, would give us a total (above 3 per cent on all expenditures at the three dams) cash balance for the Treasury at the end of the lease of \$31,700,000. At the end of the lease the Government would become the owner of all fertilizer plants built by the lessee under the lease. It has been estimated that these plants will cost as much as \$40,000,000, but valuing them at the end of 50 years at so low a figure as \$20,000,000, the value of these fertilizer plants, added to the cash balance of \$31,700,000, would give the Government at the end of 50 years, in cash and property, \$51,700,000.

If, however, the sinking fund is allowed to run, as it should, for 100 years, as provided in my bill, then at maturity the sinking fund alone would pay into the Federal Treasury every dollar spent at the Wilson Dam, Dam No. 3, and Cove Creek Dam, for national defense, for power, for navigation, and incidental flood control.

Table No. 2. In this table I have used a rate of interest of 3½ per cent on the total expenditures of all kinds at Wilson Dam, Dam No. 3, and Cove Creek Dam, and at the end of 50 years there will be a surplus of interest earned over 3½ per cent amounting to \$7,830,000. Adding this to the value of the sinking fund at the end of 50 years, which is \$10,800,000, there will be a total cash surplus of \$18,630,000, and including the value of the fertilizer plants constructed by the lessee, estimated at \$20,000,000 (as found above in the 3 per cent plan), which are to become the property of the Government at the end of the lease, there will be a total surplus in cash and property of \$38,630,000.

Table No. 3. This table does not include any part of the cost of the dams chargeable to navigation, but shows, if bonds were issued (and of course I do not favor a bond issue), the surplus remaining after paying 3 per cent, 3½ per cent, 3¾ per cent, and 4 per cent on all expenditures at all three dams, except navigation charges—navigation being treated here as in all other river and harbor projects. Your especial attention is directed to the fact, that with a 4 per cent interest rate there will remain a surplus of \$140,480.

We have two legislative plans before Congress for disposing of Muscle Shoals. The Madden-Willis plan, so called (Senator WILLIS, of Ohio, having introduced my bill in the Senate), and what is known as the Morin-Norris plan, found in H. R. 10028, introduced into the House by Mr. MORIN, of Pennsylvania, and S. J. Res. 46, introduced into the Senate by the Senator from Nebraska, Mr. NORRIS (Mr. LA GUARDIA, of New York, has introduced the Norris resolution into the House).

The Morin-Norris bills are both power bills open to serious objections that are, in many respects, the same. The Morin bill would authorize a "satisfactory lease" of the power properties in language so vague as to make it impossible to estimate what the returns to the Government would be. What does Mr. MORIN mean by "net return," and who is to decide what the "reasonable value of the properties so used" amounts to? The Morin-Norris plan proposed a water-power policy for the Government to generate and distribute power at Muscle Shoals among the States within transmission distance. The Morin-Norris bills do not, either of them, state or offer an estimate of what this proposed Government water-power policy, with extended transmission lines, will cost. However, in the hearings before the Senate Committee on Agriculture and Forestry in 1924, Mr. E. A. Yates, vice president of the Alabama Power Co., testified that the interconnected power systems of the Southeast would be able to absorb a large part of the Muscle Shoals power with the construction of several main transmission lines approximating in cost \$10,000,000. But Mr. Yates explained that as the demands increase for power and transmission lines are extended the final investment in lines, equipment, and appliances would amount to a sum which Mr. Yates estimated at from three to five times the Government's investment in the Muscle Shoals project, and Mr. Yates made the significant statement that "this is quite necessary to bear in mind if a permanent market is to be found for this large volume of power."

The authors and supporters of the Morin-Norris plan are called upon to furnish for the information of Congress and yourself some approximate estimate of the cost of the Government water-power distribution policy they propose to establish at Muscle Shoals. The supporters of the Morin-Norris plan should furnish Congress a statement in the same detail that I am sending to you, showing what amount the Government will receive each year for power sold by the Secretary of War as authorized under the Morin-Norris bills and how the Government will stand in the end. Of course, in order to make such a statement—and Congress is entitled to it—the authors and supporters of the Morin-Norris plan will have to negotiate with the Alabama Power Co. They should negotiate just as carefully with Mr. Martin, president of the Alabama Power Co., to ascertain what he will be willing to pay the Government for power under the terms of the Morin-Norris bills, as the House Committee on Military Affairs has negotiated with Mr. Bell, president of the American Cyanamid Co., to find out definitely and exactly what that company will pay the Government under the terms of the Madden bill.

It was disclosed before a subcommittee of the House Committee on Appropriations at a late hearing that since the beginning of the Government's power operations at Muscle Shoals, on September 12, 1925, the Government has received from the Alabama Power Co. only about 2 mills per kilowatt-hour, and total payments have been received from the sale of power amounting to \$2,123,644.49.

In a letter to the chairman of the House Committee on Military Affairs I called attention to the fact that if during the entire period of operation of the Wilson Dam power plant, two and two-tenths years, the Secretary of War had been required to earn 4 per cent on an investment chargeable to power of \$27,500,000 (this allows \$16,500,000 to be charged to navigation and war expenditures), the deficit would have been \$1,830,798.61 on December 1, 1927. The statement of the United States engineers shows that our actual net annual earnings to date have amounted to a return on this \$27,500,000 of only 1 per cent.

I can not speak for other Members of Congress, but I can never vote for any Muscle Shoals legislation which will cause the Federal Treasury to continue such losses as these, and under the Morin-Norris

plan only the Alabama Power Co. can tell us what our losses are going to be.

The Alabama Power Co., being the only available purchaser of power from the United States, should be requested to make an offer under the terms of the Morin-Norris bills for the power at the Wilson Dam. If there are any other possible purchasers, they should be invited to make proposals. With these power offers in hand, the Secretary of War can furnish us the cost of power at the Wilson Dam per kilowatt-hour, and then we can definitely state what profit the Government will make on this power.

The Alabama Power Co. will pay more for power at Muscle Shoals than the lessee in my bill proposes, for it is not the power company but the consumer who bears the added cost. The profits of the Alabama Power Co. are guaranteed by law. You will recall that the power companies proposed to pay the United States, in addition to other interest payments, \$1,200,000 annually at the Wilson Dam on account of the benefits from the regulated flow of the river from the Cove Creek Dam. Though this offer of \$1,200,000 a year was illegal and unenforceable, the Alabama Power Co. could make it legal, and then we could find out whether there is a majority of the Members of Congress in favor of using Muscle Shoals for the manufacture of fertilizer.

The fertilizer plan in the Morin-Norris bills is essentially the same, and provides for extensive scientific research and experimentation. Not only do these bills authorize a special appropriation of \$2,000,000 for experimentation and manufacturing but they devote to this purpose the entire net revenue which the United States would receive from the sale of the Muscle Shoals power, amounting in the lease I recommend to an average of more than \$3,550,000 per year.

Under the Madden-Willis bill the United States leases its properties to competent private operators, and is out of both the fertilizer business and the power business, and in the end receives in full both the principal and interest on its entire investment in the water-power properties in addition to a substantial surplus.

Under the Morin-Norris plan we go deeper and deeper into a hazardous commercial venture without even an estimate to guide us as to the financial demands that we must meet to pay for this far-fung and wholly unnecessary program of experiment and manufacturing. The authors of these bills should at least furnish a statement to Congress as to what the cost of these experimentations and plant operations will be.

The Government already has a costly research and experimental experience account. We have nitrate plant No. 1, a failure, costing \$14,000,000. Our fixed-nitrogen research laboratory has cost us in expenditures from March 29, 1919, to December 31, 1927, \$2,149,904.42, and yet,

after spending a total in research and experimentation of \$16,149,904.42, we are asked to authorize \$2,000,000 in cash, and an average of \$3,550,000 revenue (receivable annually for the power under my bill) to construct and operate experimental and production plants, and with no approximate statement of how much the Government will finally have to pay for this vast research and experimental venture. After spending \$16,149,904.42 in research and experimentation, instead of continuing this waste the lessee in my bill agrees to establish laboratories for chemical research in fields of interest to agriculture, and will expend upon such research annually not exceeding \$1 per ton on the fertilizer produced and sold by the lessee. This cost of chemical research will be charged to the farmers, who ought to pay it, and the lessee will expend perhaps \$500,000 a year for research when the maximum production of fertilizers at Muscle Shoals is reached, and without any cost to the Government.

If we can not find out what is the best nitrogen process in 10 years, and after spending over \$16,000,000 in research and experimentation, what will it cost us under the Morin-Norris plan to find out? Will it be common sense to continue our wasteful research and experimental policy or stop it and stop our guarding and maintenance of the nitrate plants which has already cost over \$5,000,000, as my bill provides?

The power companies and fertilizer manufacturing interests will favor and support the Morin-Norris plan. The power companies last October indorsed the plan suggested by the Secretary of Agriculture and the director of the fixed-nitrogen research laboratory, and this plan is the plan of the Morin bill. The National Fertilizer Association has given its indorsement to the plan proposed by the United States Department of Agriculture. This plan is, in part, adopted in the Norris bill, and entirely in the Morin bill. If I were in favor of the power companies and did not stand for national defense and the production of fertilizers in time of peace at Muscle Shoals for the farmers, I would support the Morin-Norris plan, which allows the Alabama Power Co. to have Muscle Shoals and the Tennessee Electric Power Co. to have the Cove Creek storage dam.

I repeat to you what I said on the floor of the House on January 23, "I want to see whether the power companies of the United States have more power to pass legislation in the House than the House itself has."

Mr. President, in the interest of Government economy, in behalf of farm relief and national defense at Muscle Shoals, let us adopt a policy of business common sense.

Sincerely yours,

MARTIN B. MADDEN.

The tables accompanying the letter are as follows:

TABLE NO. 1.—Profit to Government from interest payments under Willis-Madden bill with 3 per cent financing
(Same basis as Panama Canal 3 per cent bond issue)

End of lease year	United States investment in dams, locks, and hydroelectric plants		Interest charges on bonds at 3 per cent	Lessee's payments to United States under Madden bill		Deficit below bond interest		Surplus above bond interest		Remarks
	Item	Amount		Account	Amount	For the year	Cumulative	For the year	Cumulative	
0.....		\$47,000,000	0		0	0	0	0	0	Approximate estimate at beginning of lease period.
First year.....	Wilson Dam.....	47,000,000		Wilson Dam.....	\$200,000					One-half additional units in Wilson Dam ready at end of first year. Work begun on Dam No. 3 and on Cove Creek Dam. First year of deferred interest payments on Wilson Dam.
	One-half additional machinery in same.....	3,500,000								
	Dam No. 3.....	1,000,000								
	Cove Creek Dam.....	1,000,000								
Total.....		52,500,000	\$1,575,000		200,000	\$1,375,000	\$1,375,000	0	0	
Second year.....	Previously invested.....	52,500,000		Wilson Dam.....	200,000					First one-half of additional machinery in Wilson Dam has been available for a year and 4 per cent interest on same is payable. Remainder of this machinery is now ready. Work progressing on Dam No. 3 and Cove Creek Dam.
	Remainder of machinery.....	3,500,000		Extra machinery.....	140,000					
	Dam No. 3.....	10,000,000								
	Cove Creek Dam.....	9,000,000								
Total.....		75,000,000	2,250,000		340,000	1,910,000	3,285,000	0	0	
Third year.....	Previously invested.....	75,000,000		Wilson Dam.....	200,000					4 per cent interest now payable on entire installation of additional machinery in Wilson Dam. Cove Creek Dam completed at end of third year of lease.
	Dam No. 3.....	10,000,000		Additional machinery.....	280,000					
	Cove Creek Dam (completed).....	10,000,000								
Total.....		95,000,000	2,850,000		480,000	2,370,000	5,655,000	0	0	
Fourth year.....	Previously invested.....	95,000,000		Wilson Dam.....	200,000					4 per cent interest begins on full amount Cove Creek investment (assume no locks in Cove Creek storage dam). Dam 3 completed at end of fourth year of lease
	Dam No. 3 (completed).....	11,500,000		Additional machinery.....	280,000					
				Cove Creek Dam.....	800,000					
Total.....		106,500,000	3,195,000		1,280,000	1,915,000	7,570,000	0	0	

TABLE NO. 1.—Profit to Government from interest payments under Willis-Madden bill with 5 per cent financing—Continued

End of lease year	United States investment in dams, locks, and hydroelectric plants		Interest charges on bonds at 3 per cent	Lessee's payments to United States under Madden bill		Deficit below bond interest		Surplus above bond interest		Remarks
	Item	Amount		Account	Amount	For the year	Cumulative	For the year	Cumulative	
Fifth year	Previously invested (no further investment).			Wilson Dam	\$200,000					First year of deferred interest payments on Dam No. 3.
				Additional machinery.	280,000					
				Cove Creek Dam	800,000					
				Dam No. 3	160,000					
Total		\$106,500,000	\$3,195,000		1,440,000	\$1,755,000	\$9,325,000	0	0	
Sixth year				Wilson Dam	200,000					Second year of deferred interest payments on Dam No. 3; final year of deferred interest payments on Wilson Dam.
				Additional machinery.	280,000					
				Cove Creek Dam	800,000					
				Dam No. 3	160,000					
Total			3,195,000		1,440,000	1,755,000	11,080,000	0	0	
Seventh year				Wilson Dam	1,500,000					Final year of deferred interest payments on Dam No. 3. Full 4 per cent is payable on \$37,500,000 at Wilson Dam this year and hereafter.
				Cove Creek Dam	800,000					
				Dam No. 3	160,000					
Total			3,195,000		2,460,000	735,000	11,815,000	0	0	
Eighth year				Wilson Dam	1,500,000					Full 4 per cent payable on \$26,500,000 at Dam No. 3 this year and hereafter. No further deferred interest.
				Cove Creek Dam	800,000					
				Dam No. 3	1,060,000					
Total			3,195,000		3,360,000	0	11,650,000	\$165,000	0	
Ninth to thirty-fifth year, inclusive.			86,265,000	27-year total	90,720,000	0	17,195,000	14,455,000	0	
Thirty-sixth year				Current interest	3,360,000					Principal and interest of deficit in lessee's payments amounts to \$20,016,000 at end of thirty-fifth year; one-fifteenth of this is now payable annually with 4 per cent interest on unpaid balances.
				Deferred interest	1,334,400					
				Interest on deferred interest.	747,264					
Total			3,195,000		5,441,664	0	4,948,336	2,246,664	0	
Thirty-seventh year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	693,888					
Total			3,195,000		5,388,288	0	2,755,048	2,193,288	0	
Thirty-eighth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	640,512					
Total			3,195,000		5,334,912	0	615,136	2,139,912	0	
Thirty-ninth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	587,136					
Total			3,195,000		5,281,536	0	0	2,086,536	\$1,471,400	
Fortieth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	533,760					
Total			3,195,000		5,228,160	0	0	2,033,160	2,504,560	
Forty-first year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	480,384					
Total			3,195,000		5,174,784	0	0	1,979,784	5,484,344	
Forty-second year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	427,008					
Total			3,195,000		5,121,408	0	0	1,926,408	7,410,752	
Forty-third year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	373,632					
Total			3,195,000		5,068,032	0	0	1,873,032	9,283,784	
Forty-fourth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest.	320,256					
Total			3,195,000		5,014,656	0	0	1,819,656	11,103,440	

¹ Deficit at end of 35th year.² Accumulated surplus during 27-year period.

TABLE NO. 1.—Profit to Government from interest payments under Willis-Madden bill with 3 per cent financing—Continued

End of lease year	United States investment in dams, locks, and hydroelectric plants		Interest charges on bonds at 3 per cent	Lessee's payments to United States under Madden bill		Deficit below bond interest		Surplus above bond interest		Remarks
	Item	Amount		Account	Amount	For the year	Cumulative	For the year	Cumulative	
Forty-fifth year				Current interest	\$3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	266,880					
Total			\$3,195,000		4,961,280	0	0	\$1,766,280	\$12,869,720	
Forty-sixth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	213,504					
Total			3,195,000		4,907,904	0	0	1,712,904	14,582,624	
Forty-seventh year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	160,128					
Total			3,195,000		4,854,528	0	0	1,659,528	16,242,152	
Forty-eighth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	106,752					
Total			3,195,000		4,801,152	0	0	1,606,152	17,848,304	
Forty-ninth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	53,376					
Total			3,195,000		4,747,776	0	0	1,552,776	19,401,080	
Fiftieth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	0					
Total			3,195,000		4,694,400	0	0	1,499,400	20,900,480	This surplus of \$20,900,000 remains after paying full bond interest on all expenditures for water-power purposes, including those made during the war, and on all expenditures chargeable to navigation improvement.

Basis of computations

Present investment in Wilson Dam as of Feb. 1, 1928, including locks	\$47,000,000
Estimated cost of additional generating machinery in Wilson Dam	7,600,000
Estimated cost of Dam No. 3 complete with lock	82,500,000
Estimated cost of Cove Creek Dam (no locks required)	20,000,000

TABLE NO. 2.—Profit to Government from interest payments under Willis-Madden bill with 3½ per cent financing
[Same basis as Panama Canal 3 per cent bond issue]

End of lease year	United States investment in dams, locks, and hydroelectric plants		Interest charges on bonds at 3½ per cent	Lessee's payments to United States under Madden bill		Deficit below bond interest		Surplus above bond interest		Remarks
	Item	Amount		Account	Amount	For the year	Cumulative	For the year	Cumulative	
0		\$47,000,000	0		0	0	0	0	0	Approximate estimate at beginning of lease period.
First year	Wilson Dam	47,000,000		Wilson Dam	\$200,000					One-half additional units in Wilson Dam ready at end of first year. Work begun on Dam 3 and on Cove Creek Dam. First year of deferred interest payments on Wilson Dam.
	One-half additional machinery in same.	3,500,000								
	Dam No. 3	1,000,000								
	Cove Creek Dam.	1,000,000								
Total		52,500,000	\$1,706,250		200,000	\$1,506,250	\$1,506,250	0	0	
Second year	Previously invested.	52,500,000		Wilson Dam	200,000					First one-half additional machinery in Wilson Dam has been available for a year and 4 per cent interest on same is payable. Remainder of this machinery is now ready. Work progressing on Dam 3 and Cove Creek Dam.
	Remainder of machinery.	3,500,000		Extra machinery	140,000					
	Dam No. 3	10,000,000								
	Cove Creek Dam.	9,000,000								
Total		75,000,000	2,437,500		340,000	2,097,500	3,603,750	0	0	
Third year	Previously invested.	75,000,000		Wilson Dam	200,000					4 per cent interest now payable on entire installation of additional machinery in Wilson Dam. Cove Creek Dam completed at end of third year of lease.
	Dam No. 3	10,000,000		Additional machinery.	280,000					
	Cove Creek Dam (completed).	10,000,000								
Total		95,000,000	3,687,500		480,000	2,607,500	6,211,250	0	0	

TABLE NO. 2.—Profit to Government from interest payments under Willis-Madden bill with $3\frac{1}{2}$ per cent financing—Continued

End of lease year	United States investment in dams, locks, and hydroelectric plants		Interest charges on bonds at $3\frac{1}{2}$ per cent	Lessee's payments to United States under Madden bill		Deficit below bond interest		Surplus above bond interest		Remarks
	Item	Amount		Account	Amount	For the year	Cumulative	For the year	Cumulative	
Fourth year	Previously invested. Dam No. 3 (completed).	\$95,000,000 11,500,000		Wilson Dam Additional machinery Cove Creek Dam	\$200,000 280,000 800,000					4 per cent interest begins on full amount Cove Creek investment (assume no locks in Cove Creek Storage Dam). Dam 3 completed at end of fourth year of lease.
Total		106,500,000	\$3,461,250		1,280,000	\$2,181,250	\$8,392,500	0	0	
Fifth year	Previously invested (no further investment).			Wilson Dam Additional machinery Cove Creek Dam Dam No. 3	200,000 280,000 800,000 160,000					First year of deferred interest payments on Dam No. 3.
Total		106,500,000	3,461,250		1,440,000	2,021,250	10,413,750	0	0	
Sixth year				Wilson Dam Additional machinery Cove Creek Dam Dam No. 3	200,000 280,000 800,000 160,000					Second year of deferred interest payments on Dam 3; final year of deferred interest payments on Wilson Dam.
Total			3,461,250		1,440,000	2,021,250	12,435,000	0	0	
Seventh year				Wilson Dam Cove Creek Dam Dam No. 3	1,500,000 800,000 160,000					Final year of deferred interest payments on Dam No. 3. Full 4 per cent is payable on \$37,500,000 at Wilson Dam this year and hereafter.
Total			3,461,250		2,460,000	1,001,250	13,436,250	0	0	
Eighth year				Wilson Dam Cove Creek Dam Dam No. 3	1,500,000 800,000 1,060,000					Full 4 per cent payable on \$26,500,000 at Dam No. 3 this year and hereafter. No further deferred interest.
Total			3,461,250		3,860,000	101,250	13,537,500	0	0	
Ninth to thirty-fifth year, inclusive.			93,453,750	27-year total	90,720,000	2,733,750	16,271,250	0	0	
Thirty-sixth year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 747,264					Principal and interest of deficit in lessee's payments amounts to \$20,016,000 at end of thirty-fifth year; one-fifteenth of this is now payable annually with 4 per cent interest on unpaid balances.
Total			3,461,250		5,441,664	0	14,290,836	\$1,980,414	0	
Thirty-seventh year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 693,888					
Total			3,461,250		5,388,288	0	12,363,798	1,927,038	0	
Thirty-eighth year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 640,512					
Total			3,461,250		5,334,912	0	10,490,136	1,873,662	0	
Thirty-ninth year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 587,136					
Total			3,461,250		5,281,536	0	8,669,850	\$1,820,286	0	
Fortieth year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 533,760					
Total			3,461,250		5,228,160	0	6,902,940	1,766,910	0	
Forty-first year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 480,384					
Total			3,461,250		5,174,784	0	5,189,406	1,713,534	0	
Forty-second year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 427,008					
Total			3,461,250		5,121,408	0	3,529,248	1,660,158	0	
Forty-third year				Current interest Deferred interest Interest on deferred interest.	3,360,000 1,334,400 373,632					
Total			3,461,250		5,068,032	0	1,922,466	1,606,782	0	

TABLE NO. 2.—Profit to Government from interest payments under Willis-Madden bill with 3½ per cent financing—Continued

End of lease year	United States investment in dams, locks, and hydroelectric plants		Interest charges on bonds at 3½ per cent	Lessee's payment to United States under Madden bill		Deficit below bond interest		Surplus above bond interest		Remarks
	Item	Amount		Account	Amount	For the year	Cumulative	For the year	Cumulative	
Forty-fourth year				Current interest	\$3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	320,256					
Total			\$3,461,250		5,014,656	0	\$369,000	\$1,553,406	0	
Forty-fifth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	266,880					
Total			3,461,250		4,961,280	0	0	1,500,030	\$1,130,970	
Forty-sixth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	213,504					
Total			3,461,250		4,907,904	0	0	1,446,654	2,577,624	
Forty-seventh year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	160,128					
Total			3,461,250		4,854,628	0	0	1,393,278	3,970,902	
Forty-eighth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	106,752					
Total			3,461,250		4,801,152	0	0	1,339,902	5,310,804	
Forty-ninth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	53,376					
Total			3,461,250		4,747,776	0	0	1,286,526	6,597,330	
Fiftieth year				Current interest	3,360,000					
				Deferred interest	1,334,400					
				Interest on deferred interest	0					
Total			3,461,250		4,694,400	0	0	1,233,150	7,830,480	This surplus of \$7,830,480 remains after paying full bond interest on all expenditures for water-power purposes, including those made during the war, and on all expenditures chargeable to navigation improvement.

Basis of computations

Present investment in Wilson Dam as of Feb. 1, 1928, including locks	\$47,000,000
Estimated cost of additional generating machinery in Wilson Dam	7,000,000
Estimated cost of Dam No. 3 complete, with lock	32,500,000
Estimated cost of Cove Creek Dam (no locks required)	20,000,000

TABLE 3.—Assuming a bond issue for financing the Madden-Willis bill, the following shows the surplus above bond interest

(Considering navigation expenditures on same basis as other rivers, without any interest charges or sinking fund)

Interest payable to United States by lessee during lease period under Madden-Willis bill totals \$177,740,480.

Average investment of United States during lease period (not including \$10,000,000 chargeable to navigation at Wilson Dam, and \$6,000,000 chargeable to navigation at Dam No. 3), is \$88,800,000.

The surplus at various rates of bond interest is as follows:

	3 per cent	3½ per cent	3¾ per cent	4 per cent
Lessee's interest payments	\$177,740,480	\$177,740,480	\$177,740,480	\$177,740,480
Bond interest requirements	133,200,000	144,300,000	155,400,000	177,600,000
Surplus	44,540,480	33,400,480	22,340,480	140,480

Mr. FLETCHER. Now, let us get back to the report on this resolution. I was discussing that. Objection is made that nitrate plant No. 2 can not be economically utilized in the manufacture of fertilizer. The claim is made that it is out of date, and that there are modern methods now available that ought to be adopted.

I ask, why are not the so-called modern methods being employed somewhere? Who is making fertilizer material by the modern methods in the United States? The Du Pont people at Charleston, W. Va., are making nitrogen, but are not making fertilizer. The Hopewell people are making nitric acid, not fertilizer. If we can find a lessee who will contract to use

these plants in the making of fertilizer, why not jump at the opportunity? The power is there, going to waste. Why not use it?

The Alabama Power Co. takes only what it chooses to take. More power can be easily added, and why not use it in making fertilizer?

This report speaks about selling power. Selling it where, to whom? We are dependent entirely on the Alabama Power Co. to distribute the power. If water power is not needed, why locate a plant at Muscle Shoals? The claim in the report is that gradually we are getting away from the use of water power in the making of fertilizer. If it is not needed, why locate a plant at Muscle Shoals? Why not go to the coal fields with the fertilizer plant? Yet this resolution compels the location of a plant at Muscle Shoals, and some other plants for experimental purposes in other parts of the country?

Who claims to-day that we do not need the power in the making of fertilizer? If anyone makes that assertion with any sort of faith in its soundness, then why locate a fertilizer plant where we can get water power at all? Why not take it into the coal fields, as I have said, where we can make nitrogen by the synthetic process?

The report further says:

All this improvement in and cheapening of the process of getting nitrogen from the air has taken place since the war and since the construction of nitrate plant No. 2 at Muscle Shoals, which uses what is known as the cyanamide process. It seems clear, therefore, that it would be the height of folly and useless expenditure of public money to use the valuable power at Muscle Shoals—

for that purpose. The original act provided for the use of plants at Muscle Shoals for the cheapening of the manufacture

of fertilizer. The report says that. I wish to adhere to that original purpose. Why delay further about it?

This report further states:

It would be a useless waste of power that might be used for the benefit of all classes of people within transmission distance of Muscle Shoals.

Then why go on and complete Wilson Dam at an enormous expenditure? Why complete nitrate plant No. 2, as this resolution proposes? Why should the Government engage in producing power and selling power? Selling it where? What are the transmission lines going to cost; where are purchasers for the power to be found? What about rights of way for your lines? What about existing franchises in cities already owned by your competitors?

The report states:

The resolution provides for the construction of fertilizer plants, to be begun immediately.

What kind of plants? It is said that the cyanamide process or method is out of date and obsolete, that there are modern methods known to the scientific world. Where are they and what are they? Why not specify? This resolution does not do anything of the kind. Where are these plants located? The manufacture of fertilizer by what process? Why not use the power which we have already there now going to waste? Why talk about obsolete and out-of-date methods, when the evidence is conclusive that ammonium phosphate is being actually manufactured successfully in the United States?

I am told that the proposed lessees mentioned in that letter now manufacture 140,000 tons of ammonium phosphate a year, and sell about three-quarters of it to the fertilizer companies of the United States, and ship to some 52 foreign countries. That is all made by this obsolete process. Do you want any further evidence that the cyanamide process is practical, is feasible, and can be used in the manufacture of fertilizer, than the fact that they are doing it, and doing it successfully?

Mr. President, we should not continue longer importing at great expense large quantities of nitrate from Chile when we can make that material, when we have all the facilities and all the resources for doing it here.

We imported Chilean nitrate in 1831 to the value of \$16,050; in 1851, to the value of \$35,000; in 1871, to the value of \$673,000; in 1891, to the value of \$3,000,000; in 1911, to the value of \$17,000,000; in 1921, to the value of \$42,000,000; in 1918, to the value of \$70,000,000; in 1926, we imported over 1,000,000 tons, of the value of \$47,000,000.

Since 1831 we have imported from Chile more than 20,000,000 tons of Chilean nitrate, of the value of more than a billion dollars. The export duty to Chile has amounted to more than a quarter of a billion dollars, which we have paid. That has been added, of course, to the price of the nitrate. This nitrate contains about 15½ per cent of fixed nitrogen. The yield for 1,000,000 tons we annually import is about 150,000 tons of fixed nitrogen. About 660,000 tons of this 1,000,000 tons are used for fertilizer purposes, so the farmers get about 100,000 tons of pure nitrogen annually from Chile. The capacity of nitrate plant No. 2 is 50,000 tons of pure nitrate. Why should we not operate it?

If other processes are discovered to produce it cheaper, the American Cyanamid Co. will undoubtedly be the first to adopt them. One obstacle in the way of the Government actually operating the plant in order to produce fertilizer is shown by the contract with the Cyanamid Co., one of the proposed lessees under the Madden-Willis bill, which actually constructed plant No. 2 under a contract with the Government. It has never been completed fully, but whatever has been done there was done by that company, and under that contract it was provided that if the Government undertook to manufacture fertilizer at that plant it must pay the Cyanamid Co. \$1,250,000 for the use of their patents. In other words, the Government is not in position to make fertilizer there until they have acquired the patent processes for making the fertilizer, and if they used the cyanamide process they undertook and agreed to pay \$1,250,000 for the use of those patents.

See what the fertilizer bills have been mounting to. Using the 1920 census, North Carolina's bill for fertilizer is nearly \$49,000,000 a year; South Carolina's bill, \$52,000,000; Georgia's bill, nearly \$46,000,000; Florida's bill, about \$15,000,000. The consumption in Florida has increased from about 260,000 tons in 1920 to nearly 400,000 tons in 1926. The bill now is probably more than \$15,000,000 a year.

Compare these bills with the total cost of Dam No. 2. Power is not so much needed in those States. What they really need is power in the form and shape of fertilizer. They need it sent down there, not by transmission wires, but in fertilizer bags. There are unlimited power possibilities in this region and there

is no need for the Government going into the business of developing power and electric energy. The Aluminum Co., on the little Tennessee River, has already developed 100,000 horsepower and are doubling that now.

As far as Florida is concerned, we can get all the power there is any possible use for from the Chattahoochee River, 300 miles nearer than Muscle Shoals. We already have some water power developed in Florida on the Withlacoochee River, and power can be developed on the Suwannee, Santa Fe, and other rivers in Florida.

But, as a matter of fact, Mr. President, facing the truth as it exists, we can make power, especially in the ports of the State—at Jacksonville, at Miami, at Tampa, at St. Andrews Bay, and at Pensacola and at other ports—by the use of fuel oil, which comes to us by water, as cheap as it can be made at Muscle Shoals.

It is not a question of power we are concerned about; it is a question of meeting the needs of agriculture. That is the thing we must look after, and that is the thing we ought to devote ourselves to in connection with this proposition.

Now, Mr. President, I want to refer to the fact that many of us favored what is known as the Ford offer, and on that subject one of the most conscientious men that ever sat in this body took that view. He was one of the finest characters I ever knew, a patriot and a statesman; not only that, but a statesman who took a broad view, who kept in mind not the next election but the next generation. Not only was he a statesman but a scientist, a chemist, and he knew the difficulties of making fertilizer and the problems involved in it. I had very great admiration, as I think we all had, for former Senator Ladd, of North Dakota. Senator Ladd favored accepting the Ford offer. He wrote several articles—one on November 2, 1924, and another on November 29, 1924—for the Saturday Evening Post entitled "Why I am for Henry Ford's offer for Muscle Shoals." In the first-mentioned article he said:

As to the questions of chemistry involved in the solution of the Government's Muscle Shoals problem, however, I have some decided opinions of my own, based upon the history of air nitrogen developments and upon my own study and experience as a chemist; and with this viewpoint I approach the Government's problems at Muscle Shoals and present my views to the readers of the Saturday Evening Post.

Further on in the article he said:

At Muscle Shoals the Government has built two nitrate plants. Nitrate plant No. 1, with a capacity of only 30 tons of nitrogen in the form of ammonia a day, was an unsuccessful experimental plant costing \$13,000,000. Nitrate plant No. 2, which cost \$67,000,000, is the largest nitrate plant in the world employing the cyanamide process. Its capacity is 40,000 tons of pure nitrogen a year. This is equivalent to about 250,000 tons of Chilean nitrate, or about 70 per cent of the entire amount imported from Chile annually for use by American agriculture. Unfortunately there is ample evidence that this plant will have to be radically changed to produce the improved concentrated fertilizers that are admittedly possible, while the cost of such changes and additions, from estimates given by the Hon. MARTIN B. MADDEN, chairman of the House Committee on Appropriations, will be at least \$25,000,000.

Then he considered the question, first, Shall power production and distribution or fertilizer manufacture be paramount? and he dwelt upon such question and insisted that the fertilizer manufacture should be paramount, and said:

Second. Germany, prior to the war, was importing about 600,000 tons of Chilean nitrate annually, while to-day she is independent of Chile through the operation of her war-built air nitrogen plants.

Third. Authorities are agreed that combined nitrogen in the form of ammonia, which costs the farmer from 20 to 25 cents a pound when purchased in the form of mixed fertilizers, can be manufactured at Muscle Shoals for 5 to 6 cents a pound by several well-known processes.

Further on in his article he said:

It was made clear during the extended hearings before our committee that if we would divorce the nitrogen industry from reliance upon water power we immediately must turn to coal; but the country knows only too well how a coal strike can paralyze transportation and industry. Shall we deprive our future fertilizer industry of water power and make agriculture itself dependent upon the good grace and tolerance of the coal operators and their miners?

The domestic price of by-product nitrogen fertilizer is fixed by our domestic monopoly—mostly coal operators—in accordance with the price of Chilean nitrate, and the latter is fixed by a world-wide monopoly called the Chilean Nitrate Producers' Association. Our farmers fare no better at the hands of the by-product coke monopoly than they do at the hands of the Chilean nitrate monopoly. It seems to me that if we want to get cheaper fertilizer for American farmers we must find some other road than by permitting the fertilizer industry to be exploited by

coal and coke operators who have already declined to sell American farmers cheaper fertilizers, regardless of any technical advantage in doing so.

My position as to the use of the Muscle Shoals power in the manufacture of fertilizers squares exactly with that of Dr. E. H. Hooker, president of the Manufacturing Chemists' Association and of the Hooker Electrochemical Co., who is one of the leaders in the application of electric power to chemistry in the United States. Doctor Hooker told our committee that if the full opportunities for fertilizer manufacture are to be realized at Muscle Shoals, then the amount of power that would be necessary to meet the growing demand for fertilizer "will probably increase rather than decrease, although it will be less per unit."

The proposal of Senator NORRIS that we divorce the power from the fertilizer and limit the amount of power to be used in the manufacture of fertilizer to not more than 25,000 horsepower of primary or dependable power and 75,000 horsepower of secondary or irregular power and engage in a cooperative business relation with the Alabama Power Co. and its associates in order to distribute the larger portion of the power, although a satisfactory arrangement to the associated power interests and to the fertilizer group, will never have my support. Public utilities have had absolute domination of our water powers in this country for a generation, but never yet have they accomplished anything of importance to the farmer, although they themselves say in the report of the committee on public policy, National Electric Light Association, at their convention in June, 1922:

"No nation such as ours is stronger than its agriculture. * * * Any movement, therefore, to build up the city at the expense of the farming community is shortsighted."

Senators may vote down the Ford offer, but when they do they should realize that the Ford proposal is the only one in which the responsibility of operating nitrate plant No. 2 to full capacity is guaranteed and the operation carried on at private and not at public expense. Mr. Ford's obligations are not limited to nitrogen alone, but include other commercial fertilizers, of which there are only two—phosphoric acid and potash. The capacity of nitrate plant No. 2 means sufficient nitrogen for 2,000,000 tons of 2-8-2 commercial fertilizer—worth about \$60,000,000—annually, while the total consumption of commercial fertilizers in the United States in 1921 was 5,183,523 tons; so it is very evident that the minimum fertilizer production proposed by Mr. Ford is by no means the insignificant portion of the total American consumption which the opposition would lead the country to believe.

The comparative economic benefits of the Muscle Shoals power, when utilized in fertilizer manufacture as against public-utilities service through a superpower system, are evident when it is recognized that the farmers' expenditures for fertilizers in the 11 Southern States from Virginia to Arkansas, as shown in the following table and upon the map, were \$207,000,000 in 1920, while the expenditures for electric lighting and power purchased from all public utilities as recently as 1922 in the same States amounted to only \$109,000,000.

A saving of 50 per cent of the farmer's fertilizer bill in these 11 States would be a greater economic benefit to the people of that region than would result if every purchaser of public-utility light and power in those States were supplied at 10 cents on the dollar. Such a reduction would be absurd and manifestly impossible, while it is generally conceded that the cost of fertilizers can be reduced one-half at Muscle Shoals.

Comparing the proposal in the Madden-Willis bill with the Ford offer, I insist that the latter is more favorable to the Government and the public than was the Ford offer.

1. Henry Ford's proposal was an offer to make a lease. The Madden-Willis bill carries the lease in itself. That is to say, the precise terms, so there can be no question about what the contract will eventually be, are set forth in the body of the Willis bill. The covenant is nominated in the bond.

2. Ford proposed to purchase nitrate plants; Madden-Willis bill provides for their lease.

The Ford offer was a proposal to purchase the nitrate plants. The title to the property passed entirely out of the hands of the Government. The Madden-Willis bill being a lease, the title to the entire property remains in the United States.

3. Ford without chemical experience; American Cyanamid Co. successful fertilizer manufacturers.

Neither Mr. Ford nor his organization had manufacturing knowledge of the fertilizer business. American Cyanamid Co. for years has been successfully producing cyanamide and concentrated fertilizer—ammonium phosphate—and selling it on a large scale, and is as experienced in the fertilizer manufacturing business as Ford is in the automobile business.

4. Ford made no definite agreement to manufacture concentrated fertilizer; Madden-Willis bill requires the production of concentrated fertilizer in the form of ammonium phosphate.

The benefits of Muscle Shoals to agricultural regions at a distance depend upon the production of concentrated fertilizer containing high percentage plant food and therefore making cheaper transportation possible. Ford merely agreed to make nitrogenous fertilizers, without specifically naming any particular kind of nitrogenous fertilizer.

5. Fertilizer production in Ford offer has been increased 25 per cent in Madden-Willis bill.

Obligation as to fertilizers under the Ford offer was limited to fertilizers containing 40,000 tons of fixed nitrogen in a form not stated. The ultimate production under the Madden-Willis bill is 25 per cent greater and totals 50,000 tons of fixed nitrogen in a form which is definitely stated as ammonium phosphate. (Ammonium phosphate as now made carries 13 per cent ammonia and 48 per cent phosphoric acid, a total of 61 per cent plant food.)

6. Lease period under Ford offer 100 years instead of 50 years as proposed in Madden-Willis bill.

The lease period in the Ford offer was for 100 years, and in the Madden-Willis bill the lease period is for 50 years.

7. Lessee under Madden-Willis bill pays more interest to the Government on its Muscle Shoals investment than Ford proposed.

In the Ford offer the interest rate was 4 per cent, but there was a preliminary period during which only a fraction of 4 per cent was payable, creating a deficit below 4 per cent which was never made good. In the Madden-Willis bill this deferred interest is payable with interest thereon, and the Government receives the full 4 per cent.

8. Lessee under Madden-Willis bill pays royalty on Government's limestone; Ford proposed to purchase Waco Quarry.

In the Ford offer no royalty was payable on limestone removed from the Waco Quarry. Under the Madden-Willis bill a royalty of 5 cents per ton is payable on all limestone removed. With nitrate plant No. 2 running at capacity the royalty on limestone will amount to from \$12,000 to \$15,000 annually to be paid by the lessee to the Government.

9. Lessee under Madden-Willis bill pays Government more for maintaining mechanical equipment at Wilson Dam than Ford proposed to pay.

In the Ford offer the Government was responsible for maintaining the long series of gates and mechanical equipment across the top of the Wilson Dam. In the Madden-Willis bill the lessee maintains the gates, as well as the power houses and generating equipment.

10. Ford's offer to limit fertilizer profits to 8 per cent not as definite as lessee's agreement under Madden-Willis bill.

The Ford offer limited fertilizer profits to 8 per cent of cost but did not definitely specify the items to be included in cost; the Madden-Willis bill also limits fertilizer profits to 8 per cent of cost but avoids future controversy by definitely specifying the items to be included in cost.

11. Ford did not waive royalties on patents; lessee under Madden-Willis bill waives all royalties on fertilizer processes.

There was no provision for waiving of royalties in the Ford offer; the Madden-Willis bill provides that no charge shall be made for royalties on fertilizer processes now owned or which may be acquired by the company, nor any royalties upon inventions made through the program of research provided in the contract. In the contract between the United States and the American Cyanamid Co. for building nitrate plant No. 2 it was agreed that in case nitrate plant No. 2 was operated by the Government the American Cyanamid Co. should receive a royalty on cyanamide produced amounting to \$30 per ton of fixed nitrogen. Running at a capacity production of 50,000 tons of fixed nitrogen annually, as provided in the Madden-Willis bill, the royalty would have been \$1,500,000 per annum.

12. No distribution of power in Ford offer; surplus power to be disposed of under Madden-Willis bill.

The Ford offer made no provision whatever for the distribution of surplus power from Muscle Shoals; the Madden-Willis bill provides that such power shall be disposed of for the purpose of distribution, subject to State and Federal laws, for general domestic, industrial, and commercial uses.

13. Government nitrate plants and lessee's fertilizer plants become Government property at end of lease period in Madden-Willis bill; Ford would have continued to own the property.

Under the Ford offer the Government never regained title to or possession of its nitrate plants. The Madden-Willis bill not only provides that the Government shall regain possession of its nitrate plant properties at the end of the lease period (it never parts with the title to these properties at any time) but also confers upon the Government, without charge, the title to all fertilizer plants built by the lessee at his own expense on the leased premises. The value of these additional fertilizer

properties to be built by the lessee has been estimated at from thirty to forty million dollars.

Those who are favorable to the Ford offer have here clearly a much better proposition, more favorable to the manufacture of fertilizer, more favorable to the farmer and to the public in general than the Ford offer.

There appeared in the Dearborn Independent for January 3, 1927, an article or editorial entitled "Nitrates or battle cruisers," in the course of which this statement was made:

Whenever the right is granted by any executive of the Government, or by the power commission, or by Congress to any power company to build and own the Cove Creek Dam under the water power act, that will be a gift of \$50,000,000 to the power combine.

I say let the Government build the Cove Creek Dam, own the reservoir and dam as auxiliary power for all the plants, and that means the securing of navigation on the Tennessee, not only navigation south but navigation 80 miles farther up to the coal fields of Tennessee. Let the Government build that dam and let the Government refuse to make this gift of \$50,000,000 to the power company.

I want to submit for the RECORD a communication from the commissioner of agriculture of Florida, dated January 18, 1927, together with an article which he prepared and which is published in the Florida Review, entitled "Muscle Shoals, by Nathan Mayo, commissioner of agriculture." I ask that the letter and article may be printed in the RECORD.

THE PRESIDING OFFICER. Without objection, it is so ordered.

The letter and article are as follows:

THE STATE OF FLORIDA,
DEPARTMENT OF AGRICULTURE,
Tallahassee, January 18, 1927.

Hon. DUNCAN U. FLETCHER,
Washington, D. C.

DEAR SIR: I am inclosing a copy of Florida Review. In it you will find an article on Muscle Shoals, in which I have tried to express what I believe to be the views of the American farmer on this question.

I fully realize that you are awake to the situation as regards Muscle Shoals, and that you stand ready to vote for whatever bill offers the greatest benefit to farmers.

As commissioner of agriculture for Florida, I am deeply concerned with the early and correct disposition of this highly important matter. Agricultural leaders everywhere are agreed that there should be action, definite and positive, by the present Congress. Those who made possible the development of that wonderful plant at Muscle Shoals did so with the plan and purpose expressed in the national defense act of June, 1916, that this plant should be operated for the purpose of making fertilizer except in time of war.

Since the signing of the armistice, November 11, 1918, we have had eight years without war. And, so far as Muscle Shoals is concerned, we have had eight years without fertilizer. The plant at Muscle Shoals has made only about 5,000 tons of nitrates. Its power has been sold to private interests at a low price—a thing plainly contrary to the purpose for which the plant was built.

Meanwhile the farmers have been paying high for nitrogen. Their annual bill for fertilizers runs well over \$200,000,000. Probably one-half of this sum represents the cost of nitrogen, the most expensive single element in fertilizer.

Conservative authorities place the saving we might hope for from the operation of Muscle Shoals as a nitrate plant at from \$3 to \$5 per ton for each ton of fertilizer used. As we use more than 7,000,000 tons of fertilizer per year in the United States, you can readily see that Muscle Shoals would effect a tremendous sum-total saving to the farmers of the land. In Florida alone we estimate that the proper operation of Muscle Shoals would mean a saving of over \$1,000,000 per year on our fertilizer.

When you have read it I should be glad to have your comments on the article inclosed, and also your views on the Muscle Shoals legislation now pending in Congress.

Very truly yours,

NATHAN MAYO, Commissioner.

[From the Florida Review, Tallahassee, Fla., January 17, 1927]

MUSCLE SHOALS

By Nathan Mayo, commissioner of agriculture

With Congress again in session, the American public is once more manifesting interest in the disposition of the Muscle Shoals matter. This great piece of unfinished business has been before our National Legislature for years. The American farmers, and especially the farmers of the South, are particularly concerned with this subject. Perhaps never in history has Congress had before it a matter more fraught with economic importance to southern farmers than this question of utilizing the power of Muscle Shoals for the benefit of agriculture.

The potential value of the Tennessee River for industrial purposes has long been recognized. It is said that George Washington himself, as a young man, following his work as a surveyor and civil engineer, made a survey of the Tennessee River near Florence, Ala., and declared that it offered wonderful opportunities. From that time to now, down through the Nation's history, men have sought to harness nature's provision for power generation at this point.

During the World War, in June, 1916, Congress made an appropriation of \$20,000,000 for beginning operations at Muscle Shoals for the production of nitrates, based on recovering nitrogen from the air in the form of fixed nitrates as a basis for ammunition.

Since then additional appropriations have been made by Congress until our Federal investment at Muscle Shoals has reached the enormous sum of almost \$150,000,000.

Here we quote from a speech delivered by John W. Newman, former commissioner of agriculture of Kentucky, at a meeting of the Farmers Union, Lexington, Ky., January 1, 1927:

"It is not our purpose to pass upon the wisdom of Congress in making this huge appropriation at the time. The facts are, the money has been expended and the plant is there to show for itself. The question is, What shall be done with this plant now that the country has it? One can scarcely visualize what a million dollars can buy. Multiply this by a hundred and fifty and you will begin to get some conception of the enormity of the plant along the banks of the Tennessee River. The Wilson Dam itself is approximately a mile long, 125 feet high, and backs the waters of the river up for about 17 miles, forming the great Wilson Lake. The power generated by this dam alone is, in round numbers, under full-stream conditions, 200,000 horsepower. Now, picture approximately 6,000 acres of land, upon which are located a steam plant capable of generating 125,000 horsepower to supplement the power production of the dam; dozens of magnificent factory buildings, all filled with high-priced, highly developed machinery, the best the world affords; hundreds of residences; storehouses; its 500-acre limestone quarry, at least 80 feet in depth; 25 miles of railroad; steam engines; cars; rock-crushing machines, capable of turning out 1,200 tons of rock per day; switchboards; high-tension lines; store-rooms filled to bursting with materials; power sufficient to keep hundreds of thousands of men at work, and you will have some idea of this immense Government plant. It was operated for five weeks and made approximately 5,000 tons of fixed nitrogen—enough for the nitrogen content of approximately 50,000 tons of ordinary fertilizer.

"The power is there. The machinery is there. It has been demonstrated that the most costly content of fertilizers, namely, nitrogen, can be made at a reasonable cost. Yet it remains idle, because the President of the United States can not lease it except by act of Congress, and the funds have not been provided by Congress for its operation in the interest of the American farmer. The sad part of it is that the farmer, in the meantime, is contributing unnecessary millions in profits to foreign nations and to the fertilizer companies operating in America. The annual importation into America of Chilean nitrates, as a prime basis for ordinary mixed fertilizers, amounts to millions of tons. The export duty for this Chilean nitrate is \$12 per ton. The profits to the importers run into other millions, all of which our farmers pay."

Florida has a peculiarly good reason for wanting action on Muscle Shoals. Our State probably uses more high-nitrogen fertilizer per crop-acre than any southern State. We used last year approximately 400,000 tons, at an average price of \$36 per ton; and around half of this \$36 is represented by the nitrogen content of the ton. In other words, Florida spent more than \$7,000,000 for her nitrogen in 1926.

If Muscle Shoals can manufacture nitrates cheaply enough to reduce this outlay of \$7,000,000 to any appreciable extent, Florida farmers would like to have it done.

Muscle Shoals can be made into a national blessing or a national shame. It was the intent of the framers of our national defense act that American agriculture should benefit from Muscle Shoals. The national defense act, under which the initial appropriation was made, provides that the President of the United States can operate this plant for the production of ammunition bases in times of war and for fertilizer products in times of peace. It is now more than 10 years since this act was passed. We have had eight years of peace, during which the chief beneficiary of this gigantic power plant has not been the American farmer, but the private interests which have bought this power from the Government at a nominal sum.

Congress should adhere to the plan of those whose vision saw in Muscle Shoals a vast agency for the help of the American farmer. Muscle Shoals should be put in operation. Its giant power should not be bartered away to those who will amass millions and billions of dollars profit from it. In time of peace, it belongs to the American farmer, not to the American capitalist. And so long as we are at peace, its product should be nitrates, up to the full needs of agriculture. When these needs have been met, and not until then, should a single kilowatt of its power be sold to private interests, who will in turn use it for private gain.

The farmers of the Nation are buying more than 7,000,000 tons of fertilizer per year, at a total outlay of more than \$200,000,000, which exceeds the total cost of Muscle Shoals by more than \$50,000,000.

If we assume that the price of this fertilizer would be reduced to the amount of only \$3 per ton by the operation of Muscle Shoals—and that is probably a low estimate—we have here a saving of \$21,000,000 per year. Within 10 years, properly operated, this vast national asset could be made to pay back in savings to the farmers of the land every penny our Nation has put into it. Will Congress do its duty?

Mr. FLETCHER. Mr. President, I have already taken more time than I anticipated on this matter. It is a matter of very great importance. I hope we can arrive at some definite conclusion with respect to the policy to be adopted and with respect to the putting to use these properties and placing this great enterprise on a sound basis.

Mr. KING. Mr. President, will the Senator from Florida before he concludes permit an inquiry?

Mr. FLETCHER. Certainly.

Mr. KING. If I understand the Senator, I am rather disposed to accept the view which he has announced; that is, that he prefers to subordinate the power possibilities of the enterprise and project to the commercial manufacturing of fertilizer for the use of the farmer. We have the so-called Norris proposition before us, which emphasizes the power scheme; indeed, as I understand it, and as I interpret it, it means, if we accept it, that we shall have power and we shall not have fertilizer, because the Government has utterly failed thus far in its experimentation in producing fertilizer, whereas private individuals and corporations have succeeded and undoubtedly can succeed. If we reject the Norris proposition, does the Senator from Florida think that the so-called Madden bill or Willis bill—the latter being before the Senate and the former before the House of Representatives—would carry out the plan for which the Senator has been contending, would sufficiently protect agriculture, and would sufficiently prevent the Government from going into private business, for I am very much opposed to the Government going into private business; that is, in the field of private endeavor?

Mr. FLETCHER. I think undoubtedly, Mr. President, the proposed lease set out in the Madden-Willis bill would bind the lessee to operate the plant. The Government under that lease would retain title, of course, to all the property, to all the dams that it has already built or may build hereafter, to all the improvements, and the lessee would control and operate the plant for a period of 50 years. Then, of course, control of the property would all revert to the Government. The Government, however, would have nothing to do with the operation during the lease period. Among other things that I did not mention before, I think the contract provides that the lessee shall spend \$35,000 a year in the maintenance of the Wilson Dam and shall also spend \$25,000 a year in the maintenance of Dam No. 3, in addition to the other things I mentioned just a moment ago.

There may be some details about the bill that I would prefer to have changed; it may be that we should want to offer some amendments to it; but in a broad, general way it would place us on a definite foundation. We would lease the property for a period of years; we would secure the manufacture of fertilizer that we desire and that the country needs. Then also we would be free from cost, from care, and from responsibility in connection with the maintenance of the property. I think that would be very desirable. However, whether the details of the measure are exactly what we would all like, whether we would like to amend the measure in some respects is another matter; but generally speaking that is where I should like to get on this proposition.

I voted for the Ford offer and I favored that rather than have the Muscle Shoals property lie idle and go to waste. I think, in its broad sense, the offer under the Willis-Madden bill is better than was the Ford offer, as I have just stated.

Mr. SIMMONS. Mr. President, will the Senator kindly tell me to which offer he is referring—to the offer of the Cyanamid Co.?

Mr. FLETCHER. I am referring to the offer as mentioned in the Madden-Willis bill. The parties to whom I refer are the Air Nitrates Corporation and the American Cyanamid Co.

Mr. SIMMONS. Will the Senator permit me at this point to ask him a question?

Mr. FLETCHER. Yes.

Mr. SIMMONS. Does the Senator believe that cyanamide as a nitrate will ever prove satisfactory to the farmers of this country or will ever take the place of the nitrate of soda that we get from Chile?

Mr. FLETCHER. I understand that it has to be combined with phosphate before it becomes fertilizer material, in order that it may not do harm.

Mr. SIMMONS. It must be combined with a precision equal, I think, to that with which medicine is compounded in order to make it safe; but does the Senator believe that it will ever be used in sufficient quantities to supply the needs of the farmers of this country for nitrate of soda or that it will ever take the place upon the farms of this country that is now occupied by nitrate of soda which is imported from Chile?

Mr. FLETCHER. I think there is no doubt but that it will do so.

Mr. SIMMONS. Mr. President, I have very serious doubts about it, and I am trying right now to get some light upon that question. I have talked with some chemists about it, and they have expressed to me a very adverse opinion with reference to the use of cyanamide to any considerable extent as a source of nitrogen. The cost of fertilizer to-day is largely determined by the cost of the nitrogen that is in it. The potash cost has been greatly reduced, I think; the phosphate cost is probably not so very much in excess of what it was before the World War; but the nitrogen cost has not been reduced in the same proportion.

Mr. FLETCHER. Mr. President, may I say to the Senator from North Carolina that cyanamide contains 23 per cent of nitrogen. The nitrates from Chile contain only, I think, about 15 per cent. The nitrogen must be extracted, separated from the other elements, and then combined with phosphoric acid to make ammonium phosphate, which is the form ready for use as fertilizer material.

Mr. SIMMONS. That is not the question, Mr. President. The question is whether we can with safety use enough of the cyanamide to supply the demands of the soil for nitrogen. I think we can not, except upon certain special soils, and as applied to certain particular crops; but, taken as a general proposition, I think the consensus of opinion among farmers and chemists is that cyanamide can never take the place of nitrate of soda as we get it now from Chile, and that some other process must be invented to enable us to use safely a larger quantity than can be used by the present process. In other words, it is necessary to use a very large quantity of acid phosphate and a large quantity of potash and a large amount of filler, in order to use a small quantity of cyanamide with safety to plant life. If the margin of safety happens to be exceeded the crop is destroyed. I am very much troubled about that situation. I have been sending inquiries to some people who, I think, can throw some light on the subject. I am afraid that Senators are not sufficiently familiar with chemistry to throw the necessary light on it.

Mr. FLETCHER. I think the Senator is laboring under a misapprehension. Cyanamide is not used as a fertilizer; it is not sold to the farmers to be so used.

Mr. SIMMONS. I know that. Of course, it would kill every crop that it was used on, if that were done.

Mr. FLETCHER. It is merely an ingredient of fertilizer that has to be mixed with other ingredients before it is available for use on the farm.

Mr. SIMMONS. The point I make is that there can not safely be put on the land a sufficient quantity of that cyanamide mixed with phosphate and with potash to give the necessary quantity of nitrate of soda.

Mr. BLACK. Mr. President, may I make a suggestion to the Senator?

Mr. SIMMONS. Certainly.

Mr. BLACK. The Senator is absolutely correct, in my judgment, in his statement about cyanamide. The plan is not to use cyanamide in the mixture as cyanamide, but to extract from the cyanamide the nitrogen that is contained in it. It makes no difference whether that nitrogen comes from Chile or comes from the air; the nitrogen will be exactly the same. When that nitrogen is extracted from the cyanamide and it is mixed with phosphate, through a phosphoric-acid process, there is an absolute departure from cyanamide; it has ceased to be cyanamide by a chemical process.

Mr. SIMMONS. Then let me ask a question. As a farmer I know that there can be used almost an unlimited quantity of Chilean nitrate on the land without hurting it and without hurting the plant life. If cyanamide be taken and there be extracted from it ammonium, we will say, or nitrate of soda, can that be used in large quantities with safety to plant life? Can there be used as much of that as there can be of nitrate of soda in the Chilean form?

Mr. BLACK. I will explain that. There can not be so much of that used as there can be of nitrate of soda, because nitrate of soda in the Chilean form contains 15.5 per cent of nitrogen. The cyanamide contains, in addition to the nitrogen, lime, and the lime could and would be injurious under many circumstances.

Mr. SIMMONS. The lime can be extracted?

Mr. BLACK. Certainly; that is the only way fertilizer could be manufactured from it. The lime is separated from the nitrogen and then the remaining nitrogen under a chemical process is mixed with phosphate and with some other ingredient.

Mr. SIMMONS. With potash.

Mr. BLACK. Yes; with potash, if it is desired to use potash; and so there has been an absolute departure from the cyanamide, and the danger which the Senator anticipates from the use of cyanamide disappears.

Mr. SIMMONS. Does the Senator mean to say that the secondary product that is obtained from cyanamide by eliminating the lime is as harmless to plant life as is nitrate of soda?

Mr. BLACK. I mean to say that the nitrate that is obtained from cyanamide by proper extraction is exactly the same chemically, according to the formula, as the nitrate obtained from nitrate of soda; there is not a particle of difference on earth; it is all nitrate. One would injure no more than the other, because one has the same chemical properties as the other.

Mr. SIMMONS. Would it be possible to use the same quantity?

Mr. BLACK. It could be used in the same quantity and would have exactly the same effect, because both are nitrogen after the process of extraction has been completed.

Mr. SIMMONS. Now, I should like to ask the Senator. Has any of that secondary product been put on the market by the Cyanamid Co.?

Mr. BLACK. It has been put on the market by mixing the nitrogen with phosphate under the form of ammonium phosphate and sold under the trade name of "ammo-phos." There is no difficulty whatever in extracting the nitrogen.

Mr. SIMMONS. Has the Senator any information as to the amount of ammo-phos which was sold in the market of the United States in the last year?

Mr. BLACK. Ammo-phos as ammo-phos, according to my understanding, was not sold in the market of America.

Mr. FLETCHER. It is sold to fertilizer factories.

Mr. BLACK. Some of it is sold to fertilizer factories. I gave the figures a few days ago. Thousands of tons have been shipped to foreign countries that are sadly in need of fertilizer. It has been used both in foreign nations and in the United States through the intermediary of commercial fertilizer factories.

Mr. SIMMONS. Then the Senator means to say that ammo-phos was combined with phosphoric acid and potash, and fertilizer was thus made. Now, can the Senator give the number of tons of that product that were purchased by the manufacturers of fertilizer as compared to the number of tons of nitrogen that were purchased?

Mr. BLACK. I can not give the number of tons in comparison. It was not near so many, as I showed the other day in my statistics; but it was the entire output of the only cyanamide plant in North America. That is what was sold—the entire output.

The point I rose to attempt to explain was simply that I agree fully with the Senator in his statement that cyanamide as cyanamide would not be as useful as nitrate coming from Chile, for the reason that the nitrate coming from Chile is combined with a filler which is harmless to the soil, but the nitrate under the cyanamide process is combined with lime, which is frequently harmful and injurious to the soil.

Mr. KING. And to some soils beneficial.

Mr. BLACK. And to some soils beneficial, just as the Senator stated; but as a general fertilizer, for general use, cyanamide would not be satisfactory. If, however, you extract the nitrogen from the cyanamide and mix it with phosphate under the process which we hope will be installed at Muscle Shoals, although none of the bills provide for it as now pending, or the joint resolution of the Senator from Nebraska, or the substitute—it would take a tremendous expenditure to put up the necessary equipment to mix the phosphate with the nitrogen—if that plant is put up there, and Dam No. 3 is built, right up in Tennessee, in Giles County, there could be floated down the river on barges phosphate rocks, or they could come from Florida, thereby combining the two. When you extract the nitrogen from the cyanamide, leaving out the harmful element of lime, and combine it with phosphate, then you have nothing injurious to your crops, and you have absolutely gotten away from the danger which the Senator foresaw of the lime contained with the nitrogen in cyanamide.

Mr. SIMMONS. Now, will the Senator answer one more question? He says that product was sold to some extent in the American markets and used by the makers of fertilizer in

combination with acid phosphate and potash. I want to ask the Senator whether this secondary product—for that is what it is—of cyanamide has, up to this time, been made so as to be sold in the market as cheaply as the Chilean product?

Mr. BLACK. Yes, sir; it has been made so as to sell, according to the figures which I give to the Senator, and is being sold at figures which would be related as 7.6 cents a pound to 15.5 cents a pound.

Mr. FLETCHER. Now, may I answer the Senator's question—I think I can to some extent, anyhow—about the quantity that has been put on the market by the Cyanamid Co., which manufactures ammo-phos? My information is—and I have been told that by gentlemen who, I think, are reliable in every way—that they are manufacturing now about 140,000 tons of this ammonium phosphate, and that they sell about three-fourths of that to fertilizer factories in the United States, and the remainder they ship abroad to some 52 countries.

Mr. BLACK. One hundred and forty thousand tons of ammo-phos, does the Senator mean?

Mr. FLETCHER. Yes; 140,000 tons of ammo-phos, this material here.

Mr. SIMMONS. And they sell about one-third of that to the American fertilizer producers?

Mr. FLETCHER. About three-fourths of it to the fertilizer manufacturers.

Mr. SIMMONS. Does the Senator know the price at which they sell it, as compared to the price of the other material?

Mr. FLETCHER. No; I do not know, but the price must be as the Senator from Alabama stated.

Mr. NORRIS. Mr. President, the reason why fertilizer is so cheap to-day is because the Cyanamid Co. are selling this stuff to the fertilizer trade. I suppose that accounts for the rejoicing that I have heard so many times, from sections of the country where they use fertilizer, that they are getting it so cheaply to-day. The Cyanamid Co. are in the business. They have been making fertilizer and selling it to the fertilizer people. Therefore you people from the South who use a great deal of fertilizer get it so cheaply; and that is the reason why it is desired to turn over this whole property to the Cyanamid Co., and invest \$77,000,000 more of public money, because in their operations in the fertilizer world they have so cheapened the product that they have all the farmers in favor of them.

Mr. SIMMONS. I asked the question, Mr. President, because there is an outcry, or seems to be an outcry, coming from the farmer that the price of the farmer's fertilizer has not been reduced, but rather has been increased. I do not know whether that is true or not.

In certain years it seems to be a little cheaper than it does in other years. Last year we had reasonably cheap fertilizer. This year the price has been again advanced.

Mr. NORRIS. I do not know why the Cyanamid Co. have raised the price of fertilizer.

Mr. SIMMONS. It has been raised, however.

Mr. NORRIS. Evidently they think the farmers like to pay a good price and see them prosperous.

Mr. President, it has been stated here several times, and I take the figure as being correct—the Senator stated it just now, and stated it the other day—

Mr. BLACK. That was stated from memory. I put it in the Record the other day. That is my recollection of it.

Mr. NORRIS. I am going to refer to something else—the price of nitrogen by the cyanamide process. It has been stated as 7 and 8 cents a pound, as I remember; and I interrupted the Senator the other day when he gave that price and said that in my judgment, as I remembered the figures, nitrogen by the synthetic process—the most modern process—can be produced from the air for practically half the price at which the Senator himself says the cyanamide process produces it. He gives it again to-day at 7 cents; but, to be sure about it, I took it up with three eminent chemists. One of them is Doctor Cottrell, whom you all know. Another one is Doctor Howe, the editor of the leading chemical journal of the entire world. The third one is Doctor Parsons, who was one of President Wilson's committee that located the plant at Muscle Shoals, and a man whom President Wilson sent to Europe to study the fertilizer question.

As far as I know, none of these three eminent men have any interest—they all tell me they have none, and I believe every word they say—no financial or other kind of interest in any factory of any kind, or any system, or anything.

Since the Senator's speech the other day, when he gave the cost as 7 cents, and when I said I thought they were able to get nitrogen from the air by the synthetic process for 4 cents or less, I have taken it up with these men; and, according to

the consensus of opinion of these three chemists, I was too high in my figures. Nitrogen can be produced from the air to-day by the synthetic process for less than 4 cents.

Mr. FLETCHER. Why do they not do it?

Mr. NORRIS. The du Pont people are doing it right down here at Charleston now, so these people tell me.

Mr. FLETCHER. Not for fertilizer.

Mr. NORRIS. They have not made it in large enough quantities. They are not in the fertilizer business; and if they were in the fertilizer business and I produced their testimony here, at once some of these Senators would jump on me and say, "Why, here is the trust! Here are the interested people, and you are producing evidence from interested people!"

The du Pont people at their factory down here at Charleston, in West Virginia, are going ahead on a purely business basis, investing their money for profit. There is no secret about it. They have no interest in fertilizer. They do not make fertilizer. They have never made any fertilizer. They are making explosives, but they get nitrogen from the air to make them; and you could not give them cyanamide plant No. 2 for nothing if you would compel them to operate it.

The Senator from Virginia [Mr. GLASS] told us the other day what a large plant that will be—one of the largest in the world. I think it will be one of the largest in the world when it is completed. I refer to the plant at Hopewell, Va., where they are going into the fertilizer business as a matter of financial profit.

Mr. FLETCHER. I understand that they are making nitric acid.

Mr. NORRIS. They will make nitric acid, undoubtedly. If you get nitrogen from the air by the synthetic process, you get it in the form of ammonia. That is the way they get it, and they are building their plant now. I understand that the plant at Syracuse, one of the first that was built after the war, using the synthetic process, I think by the du Pont people—I am not sure—

Mr. KING. Was that the Cassell process, where the company failed?

Mr. NORRIS. As they have it now, they have utilized factories of the Cassell process and the Haber process. It is a modified form of it, and it is called by a general term the synthetic ammonia process.

Mr. KING. The Senator knows that the Cassell Co. failed.

Mr. NORRIS. It is a scientific fact, Senators—it is scientifically demonstrated, it seems to me—that you can get nitrogen from the air to-day for less than one-half what we could get it for when we commenced these experiments right after the war; and yet Senators cry out against experiments. If it were not for these experiments we would not have a synthetic-process plant in the United States, and during the war we did not have one. They have all been built since, and not a single cyanamide-process plant has been built during that time in the United States.

I can not find fault with a man who still wants to use the cyanamide process. That is all right. In the measure that I have here, while Senators have spoken differently about it, there are no strings on the Secretary of War. He can use the cyanamide process if he wants to. It is not stated in that measure what process he must use. The world is open to him. His hands are untied. He is free, and I want him to be that way, or whoever we designate to make fertilizer with the idea of cheapening it; and every plant that has been put up has cheapened the process.

I am not in touch with the Hopewell people; but I have talked with the junior Senator from Virginia [Mr. GLASS] and with several chemists about their plant. They all know about it. Some of them know about it in a great deal of detail; and they tell me, and I firmly believe it—it is the natural thing to expect—that when the Hopewell plant is completed they will get nitrogen from the air cheaper than the du Pont people get it down at Charleston. It is natural that they should. It will be a larger plant, on a larger scale; and I was told only within the last 10 days, from, I think, a reliable source, that the du Pont people expect to more than double the plant at Charleston, and they expect to cheapen the product even below the present figure.

Mr. SIMMONS. Let me ask the Senator a question: What process do they propose to use at Hopewell?

Mr. NORRIS. The synthetic ammonia process.

Mr. HEFLIN. Mr. President, if the du Pont people do complete their Hopewell plant and manufacture fertilizer, and the one at Charleston, and the Government directs that at least 40,000 tons of fixed nitrogen shall be made annually at Muscle Shoals, will not all of this fertilizer coming into the market help to cheapen it to the farmers? It will produce competitive buying.

Mr. NORRIS. I should think so; but I do not want to handicap my Government by directing that public funds, taken out of the Treasury of the United States, that have been contributed from the toil and the sweat of the masses of this country, shall be used to manufacture a product by a process that is out of date, when we know in advance that we will not be able to compete with these private plants that have been established on a business basis. Therefore I do not want to compel the Secretary of Agriculture to make fertilizer by the cyanamide process. If anything new happens, if any new development takes place, and that process is the cheapest, let him use it. I have no prejudice whatever against it. I want to have this done by the cheapest method. If I am going to vote to put my country into business here to experiment with the fertilizer proposition, I do not want to hamstring them and I do not want to tie them up by anything that will handicap them when they come up against a private party or a private corporation that is doing the same thing.

Mr. HEFLIN. The American Cyanamid Co. is doing business in competition with the synthetic processes of the world, and it is taking trade away from them. It is doing a flourishing business abroad, and it wants to come into the United States, and is willing to invest its money and compete with the companies doing business here.

Mr. NORRIS. It is here now. The world is open to the cyanamide people. They own the patents themselves, and there is no reason why they should not establish a plant in every State in the Union. Why have they not done it? They admit they have been making cyanamide, and there have been other uses for it. Out of it may come a fertilizer; nobody disputes that. They have been making cyanamide for years. Yet men are crying "Fertilizer Trust," when they have been pouring into the coffers of the manufacturers of fertilizers their product, all they have sold here. They are shipping it to Europe, it is said. I am not complaining of them for doing that. It is said, "They have a process, and let us compel the Government to utilize that process, and use it at the expense of the taxpayer," when nobody is doing it on a business basis.

Mr. HEFLIN. The point I am making now is that the Government has plant No. 2, and it is a cyanamide plant.

Mr. NORRIS. That is right.

Mr. HEFLIN. That they have invested millions in it, and that the people who use the cyanamide process can come in and use that and cheapen fertilizer to the farmer.

Mr. NORRIS. All right. Let me make a proposition now to the Senator. Senators say that fertilizer can be made in the cyanamide plant down there, and the product cheapened, and the Senators who are saying that say, "We do not want the Government to do it; we want a private party to do it."

Here are the owners of the patents, the very men who built plant No. 2 for the Government down at Muscle Shoals. If you believe that they are not misrepresenting anything to us, that they do not care about the power, why do you not accept my proposition, which I have signified my willingness to accept in the way of amending my resolution so as to provide that nitrate plant No. 2 shall be turned over to them for 50 years, if they want it, for nothing, without the payment of a cent of rental. Turn over the Waco Quarry, and let them pay only 5 cents a ton for limestone they take out, and then supply them with enough power from the Government of the United States to operate the plant at actual cost. If they are in earnest, if Senators believe what they are talking about, why do they not accept that proposition, and let them make fertilizer? I stand ready to do that now.

Mr. HEFLIN. We expect to have them use that plant to make fertilizer, but we do not want to tie the Government into it.

Mr. NORRIS. All right; let us lease it to the Cyanamid Co. The Senator says he does not want the Government tied into it, and I do not, either. Let us lease it to the Cyanamid Co. If you do not want to lease it to them, name the man you do want to lease it to. Lease it to the Farm Bureau, lease it to Chester Gray, who represents them, lease it to anybody you might name, if he will furnish a bond that he will run it to its capacity and make fertilizer.

Mr. HEFLIN. As soon as we get the Senator's resolution out of the way, we are going to lease it to somebody.

Mr. NORRIS. I am going to offer that as an amendment to my own resolution on the floor of the Senate when the time comes, and I will be delighted if they accept it.

It is said continually that this is the cheapest way to make fertilizer there is on earth. If that is true, there is your opportunity, there is an investment of between fifty and sixty million dollars of the Government of the United States that I am willing to turn over to them free of rent.

Mr. HEFLIN. Then how would the Senator provide for the handling of the surplus power?

Mr. NORRIS. There probably will not be any. Give them all the power they need to operate the plant.

Mr. HEFLIN. If there is surplus power, who will dispose of that?

Mr. NORRIS. Let that be disposed of according to the resolution. Let the little town of Athens, over in Alabama, that has wired here that it is ready to build a transmission line to Muscle Shoals if we will pass this resolution have it. Let all the other towns have it.

Mr. HEFLIN. Suppose they do not all build these lines; then who will dispose of the power?

Mr. NORRIS. Suppose they do not, then we will decide that. Give them an opportunity to do it, and let us see.

Mr. HEFLIN. But the Senator is going to have the Secretary of War dispose of it.

Mr. NORRIS. Yes; but I am not prejudiced about it. Provide for some other agency, say the Federal Power Commission. I will not object to that. We have to have somebody to handle it.

Mr. HEFLIN. We would be tying the Government into it even with that.

Mr. NORRIS. The Government is in it now.

Mr. HEFLIN. Why not lease it?

Mr. NORRIS. Does the Senator suppose somebody is going down there in the night and take possession and kick the Government employees out of all these houses? Will not the Government have to consent to do it?

Mr. HEFLIN. Certainly.

Mr. NORRIS. We have it now. Let us lease it to them, give it to them for 50 years free of rental, if they will make fertilizer. But let us disconnect their bid from the power proposition. You talk about this being only a fertilizer proposition and not a power proposition. There has never been a bid made yet but what has been made on the basis of the power.

Mr. CARAWAY. Mr. President, I want to ask the Senator from Nebraska this question. He has offered to turn over plant No. 2 rent free to anyone who would lease it to manufacture fertilizer. Does the Senator want to do that if it takes all the power generated at Muscle Shoals?

Mr. NORRIS. Yes.

Mr. CARAWAY. I was under the impression, from what the Senator said, that he thought the cyanamide process was not a practical process.

Mr. NORRIS. I do not think it is.

Mr. CARAWAY. Would the Senator want to give to somebody all of Muscle Shoals, to make use of it, if he knew it could not succeed, and that it would not be worth anything to agriculture?

Mr. NORRIS. If their theory is true, then I am wrong. If they accept it, then I am wrong; and I am giving them an opportunity to demonstrate that I am wrong.

Mr. CARAWAY. Is it just a bluff? Is that what the Senator means?

Mr. NORRIS. I do not think they will accept it.

Mr. CARAWAY. That is what I wanted to find out.

Mr. NORRIS. But if they do accept it, it will be because they believe they can do it; and if they can do it, they will get my blessing, just the same as they will the blessing of the Senator from Alabama.

Mr. CARAWAY. I am not trying to be critical of the Senator. I am trying to find out, if it is the belief of the Senator from Nebraska that the process is a failure, and necessarily must result in failure, whether he would want to make a contract to tie up the whole Muscle Shoals plant for 50 years to manufacture fertilizer by a process that he knows would be a failure.

Mr. NORRIS. If I were to answer that question categorically, I would, of course, say "no"; but I am going on this theory: That if these men who are claiming before us now that they are right, and that they can do this, really can do it, I am wrong; and if they can do it, I want to give them an opportunity to do it. If I am wrong, there is a chance to show it; and if they are right, then they can make the fertilizer cheaper.

Mr. CARAWAY. However, does the Senator want to tie up a great natural resource for 50 years, when he is satisfied that it is a mistake and that the process is a failure?

Mr. NORRIS. I am willing to tie it up for 50 years if somebody is willing to take it who will agree to use it exclusively for fertilizer.

Mr. CARAWAY. The Senator believes that fertilizer made by the cyanamide process can not be commercially successful, does he not?

Mr. NORRIS. Yes; I do.

Mr. CARAWAY. Then would the Senator want to tie up this great resource—

Mr. NORRIS. I understand the Senator, and he ought to be fair about this.

Mr. CARAWAY. I am trying to be.

Mr. NORRIS. I am saying that I may be wrong, and they may be right. If that is true, then they will accept the proposition, and I will subside. Then the farmer will be getting fertilizer, and that is all I want.

Mr. CARAWAY. Is the Senator willing to abdicate his right as a Senator and turn over a great natural resource to a corporation, or to an individual, that he knows can not make a use of it which would be beneficial to the public?

Mr. NORRIS. No, no, no!

Mr. CARAWAY. I am not trying to be critical of the Senator.

Mr. NORRIS. I am not willing to do that, but here comes a big corporation and says, "We can make fertilizer with this plant." I say, "If you can make fertilizer with this plant, I am willing you should have it." That is conceding that they may be right, and I may be wrong.

Mr. CARAWAY. Is the Senator willing to concede that anybody ought to have \$50,000,000 worth of the Government's property turned over to him to exploit, without paying the Government a single cent for it?

Mr. NORRIS. But they will not be able to do that.

Mr. CARAWAY. Then the Senator is just proceeding upon the theory that he knows nobody can accept it.

Mr. NORRIS. No; not necessarily. If they can accept it, I would let them have it. But that is not the proposition. If these people take it and agree to make fertilizer with it, my proposition will provide that they must furnish a bond that they will comply with those conditions, they will pay maintenance and upkeep of the dam at 4 per cent interest to the Government on the power facilities that it furnishes, but the nitrate plant No. 2 will be given to them rent free, and they will not need to take the power from the Government if they do not want to. If they can get it somewhere else cheaper, let them get it elsewhere.

Mr. CARAWAY. I thought they were to be furnished power at cost.

Mr. NORRIS. That is cost. I figure that as cost.

Mr. CARAWAY. The Senator would furnish power at cost and give them \$50,000,000 worth of property rent free for 50 years?

Mr. NORRIS. Yes; if they will make fertilizer. That is going about as far as anybody ought to be asked to go. Instead of being condemned as a man who is trying to prevent the farmer from getting fertilizer, there is an opportunity for these men, there is an opportunity for this farm bureau, if it has not been bluffing us, if it has not been trying to get this power in the guise of a promise to give fertilizer, there is an opportunity for them to accept it. I know some of those men, eminent fellows, I know these Senators here, and I have not any reason to doubt their word. They believe they can do it. If they can do it, then all of my information, and the scientific men who have advised me, are wrong; and that might be. But the result will be cheap fertilizer to the farmer, if they can do it.

Mr. CARAWAY. If the Senator will pardon me, if there was anybody criticizing the Senator from Nebraska, it was not I. I have for him the most profound respect, and I should resent anybody saying that he wants to be an aid to a Power Trust or to a Fertilizer Trust. That, of course, is so unthinkable to me that I do not think anybody is going to make any such charge. What I want to do is to find out exactly what ought to be done. What I was trying to find out was if the Senator was seriously willing to turn over to anyone for 50 years a plant which he says will require every kilowatt of power developed at Muscle Shoals to experiment with a process to make fertilizer which the Senator is sure is not a success, and can not be. I do not think we ought to jockey with the public's interest. I do not think we ought to bluff each other at the expense of agriculture. I just want to be certain that we all understand each other.

Mr. NORRIS. I think this bid of the Cyanamid Co. is a bluff. I think the bid of the power company was a bluff. I think there has not been a single bid ever made for Muscle Shoals where the bidder did not really want to get power, but they always tried to make Congress and the country believe that they were going to make cheap fertilizer. As Hanna and others testified before the committee when they were fighting the Ford offer, if anybody gets this plant and agrees to make fertilizer, he will have to be subsidized with power. My proposition would not subsidize anybody.

Mr. CARAWAY. Oh, yes; it is a \$50,000,000 subsidy.

Mr. NORRIS. Under my proposition they get no power whatsoever except the power necessary to operate the plant, and they have to make fertilizer to the capacity of the plant, and make that exclusively.

Mr. CARAWAY. The Senator is offering a \$50,000,000 subsidy to start in with.

Mr. NORRIS. I do not think it is.

Mr. CARAWAY. If they accept it.

Mr. NORRIS. The cyanamide plant cost more than \$50,000,000; but I am not criticizing its construction. I think the Government was perfectly justified in building it. But it is one of the great war activities. It is out of date now. If we had a war to-morrow, we would probably start it up; but we would not run it six months. If we had a war to-morrow, we would commence to build synthetic plants at Muscle Shoals, perhaps, and at other places, because we could save money by doing that, and scrapping plant No. 2.

Mr. CARAWAY. That brings me down to just what I want to ask the Senator. I discussed this with the Senator in the committee, and I know, unless he has changed his position, what his position is; but I had hoped he would change his position. I am perfectly willing to accept the Senator's resolution with an amendment that they shall determine, by actually running the plant, whether or not nitrate can be made advantageously fixed by the cyanamide process. I am not at all opposed to the Senator having the power then to try the synthetic process. I am just hopeful, in view of the fact that for eight long years we have stood here and said over and over again to the American farmer that Muscle Shoals and the nitrate plants were dedicated to the national defense in time of war, and to agriculture for the purpose of making cheap fertilizer in time of peace, that we are going to keep faith with them, that we are not fooling with them. Let us try out both processes, and whichever one is the more advantageous, let us use it.

I am willing to go further even than the Senator. I am willing to say we shall dedicate every kilowatt of power that is generated at Muscle Shoals to the exclusive use of trying out these two processes. Let us put plant No. 2 in operation, and if the cyanamide process is obsolete or obsolescent and can not be used, that fact will be demonstrated. If the synthetic process is better and cheaper, then we will use it; but we will give to the American farmer a certificate that power has not anything to do with the measure that finally goes through Congress, but that every kilowatt shall be dedicated to giving him cheaper fertilizer. If the Senator will accept the amendment—

Mr. NORRIS. The Senator's amendment makes it compulsory, as I understand it, for the Secretary of Agriculture to operate plant No. 2.

Mr. CARAWAY. Until it be demonstrated whether the cyanamide process is obsolete.

Mr. NORRIS. I have never talked with the Secretary of Agriculture about it, but, in my opinion, when he consulted chemists and experts on the matter he would know just as well to begin with, before he turned a wheel, as he would know a year afterwards that it would not be a success. The cyanamide plants have been operated and every scientific chemist knows just what they can do. They are familiar with the work of every one of them wherever located. My proposition does not prevent him from doing that thing, but it unties his hands and says, "See what you can do with any process you want to use," and there has been no reason why he should not use the cyanamide process if he wanted to do so.

Mr. CARAWAY. If the Senator is so confident that no process except the synthetic is commercially possible and profitable, then why does any plant anywhere use the cyanamide process?

Mr. NORRIS. The Cyanamid people make a whole lot of things besides fertilizers. I put in the RECORD a list of more than 52 things that the cyanamide people make. Why should we say to the Secretary of War, "You try this process and you try that process." If we want to have a fair test, why not say to him, "Try any or all or anything you want to." That is what I propose.

Mr. CARAWAY. We equipped plant No. 2 for this process. We dedicated it for this particular thing. I believe that it is not a bad thing to keep the faith with the people whose money we used to develop the process.

Mr. NORRIS. Let us see what it would cost.

Mr. CARAWAY. Just a minute, if the Senator will pardon me.

Mr. NORRIS. If we are going to demonstrate it, it would depend on how long we would run it.

Mr. CARAWAY. I would run it long enough that these very experts would know who was right and who was wrong.

Mr. NORRIS. Has the Senator any idea whether that would be a year or two years?

Mr. CARAWAY. I have not the remotest idea. If the Senator is willing to put the whole power in their hands, I should take for granted that he would be willing to trust them and let them say when they have demonstrated it satisfactorily.

Mr. NORRIS. I am willing; but I was trying to find out the Senator's idea as to how much of a test should be made.

Mr. CARAWAY. The Senator has asked me, and I want to tell him. If they can demonstrate in six months that the synthetic process is a wiser and cheaper process, then at the end of six months let us quit the cyanamide process. I would not want to have the Government spend one nickel in doing a thing that it could not do wisely. Whenever that process has been demonstrated to be a failure, then quit it. But as long as private capital is investing millions of dollars in doing that very thing, then I am hardly justified in accepting some other theory which some scientist has evolved that some other process is better. It strikes me that inasmuch as we have said over and over again in the Senate that we want Muscle Shoals to be dedicated to the manufacture of fertilizer in time of peace, we ought to keep the faith with the people.

I was in favor of accepting the Henry Ford offer. I believe if we had accepted the Henry Ford offer we would have been the only class of people on earth who ever got two dollars from Henry Ford where he got only one back. I think he made us a good offer, and further, I think the country would have been infinitely better off if we had accepted it; but those who did not agree with me were in the majority and outvoted me.

Mr. NORRIS. Again let me say to the Senator from Arkansas and to other Senators who are earnestly and honestly trying to do what is right about this matter, as I firmly believe, that I would hate to see an experiment which to my mind would seem useless and a waste of the public money. I want to say frankly to the Senator that if the Senate would like to do that, it would not meet with serious objections on my part, and it would not seriously interfere with my resolution, in my judgment. I think it would be a mistake, but if the Senate thinks that we ought to operate nitrate plant No. 2, or direct somebody to operate it for the purpose of ascertaining what the experiment will show, there will not be any serious objection from me.

Mr. CARAWAY. Then if there is not any serious objection, if the Senator will accept that amendment we will see that his resolution has votes enough to put it through. We can do that.

Mr. FLETCHER. The Senator from Nebraska has provided that the Secretary of Agriculture shall make the experiment. The Senator from Nebraska seems to think his mind is pretty well made up about it. Why not provide for a commission?

Mr. CARAWAY. I do not care about that. I am not committed very much to the Secretary of Agriculture, who has not done much for agriculture, in my opinion.

Mr. NORRIS. In the preparation of the resolution I did not consult with the Secretary of Agriculture himself.

Mr. CARAWAY. I am sure of that.

Mr. NORRIS. I went to the people whom I knew were going to handle the problem. I want to Doctor Cottrell, who is there permanently, and to a great extent it is his language and my resolution. I put in everything he thought we would need. If we direct the Secretary of Agriculture to perform an experiment like the Senator has suggested, there is no question on earth that Doctor Cottrell will have charge of it, and everybody who knows him knows that he would do it absolutely in good faith and give everybody a fair show regardless of what he may think personally.

Mr. CARAWAY. I have no objection to it at all. Whatever we do there, we will turn around and pass it on to the farmer at the actual cost of manufacture. We will give him cheap fertilizer if the cyanamide process can be successfully so used. If it can not be successfully used, I want to know it, just as the Senator from Nebraska does. If it can not be used and the synthetic process can be used, then I am going whole soul and heart with him on the synthetic proposition, and this amendment of mine does not quit his proposition at all.

Mr. LA FOLLETTE. Mr. President, when I came to the Senate Muscle Shoals was one of the first important questions to come up for consideration. At that time I made a very careful study of the subject and discussed it at some length on the floor of the Senate. A considerable part of the speech I made then was devoted to the fertilizer phase of the Muscle Shoals problem. I demonstrated, to my own satisfaction at least, that Muscle Shoals is not a fertilizer proposition; that it is primarily a power proposition. The Senator from Nebraska [Mr. NORRIS], in his extraordinarily thorough and able discussion of all the facts, has, it seems to me, completely demonstrated beyond all possible doubt that the fertilizer phase of the Muscle Shoals problem has been disposed of by the progress

of science. It is at this time, therefore, my purpose more especially to discuss Muscle Shoals in its relation to the problem of electric power.

ELECTRIC POWER A NECESSITY OF LIFE

Mr. President, this is an electric age. It is estimated that to-day one-half the homes in the land use electric lights and that two-thirds of the machines in American factories are run by power from central plants. Expansion in electric service during the last 20 years is amazing. Approximate estimates show that the total gross revenue from the sale of electricity in the year of 1907 was \$169,614,691; in 1927 it was \$1,783,700,000. It is fast becoming the industry upon which all other industries are dependent. It is demonstrated that electricity can be made the source of light, heat, and power in every home, on every farm, and in every industry at low cost. It is plain that human welfare, comfort, and progress are more and more conditioned on the production and distribution of electric current at reasonable rates.

Long-distance transmission is revolutionizing national life. It makes it possible to electrify the farm; it brings to agriculture its time-saving advantages and economy of labor. Even more significant is the tendency to move the factories away from the congested cities into the country where more wholesome living conditions are available—fresh air, open spaces, gardens, out-door recreation. At the same time, increased use of electricity for power, light, and heat may change the living conditions of the cities, doing away with smoke and grime, promoting health and beauty and cleanliness.

The gigantic force of electricity promises to become as indispensable to the maintenance of modern standards of living as the rays of the sun. And this mighty power created out of the forces of nature must be made to serve all the inhabitants of the earth as economically and as impartially as sunlight.

A PUBLIC UTILITY AND NATIONAL MONOPOLY

Electricity is a public utility. Like the railroads, the water supply, and other kinds of public service, the production and distribution of electricity is subject to Government regulation and to Government ownership. Because of its very nature electric service is a monopoly. For practical purposes electric power can not be stored. It must be used as generated or go to waste. It can be transmitted 300 miles, and power stations can be hooked up to cover a continent.

To insure economy and efficiency in the use of electric power there must be large areas of interchangeable supply. When generated from water power it is not State boundaries but nature's sources of supply that determine the advantageous location and use of large generating plants and transmission lines.

The inherent advantage and necessity of interchange of hydroelectric power is demonstrated in a situation described by the Senator from Nebraska [Mr. NORRIS] in an article which appeared in *La Follette's Magazine* last October:

In 1922 when, in the State of North Carolina, on account of unprecedented dry weather, some of its streams had ceased to flow and all of them were very much diminished in the volume of their flow, it was going to be necessary, unless some relief came, to close down some of the factories. Some of the cities and towns would have been left in darkness. Some of the street cars would have ceased to operate. Next to North Carolina, in the eastern part of Georgia, was a comparatively large system having many generating plants. They could not give North Carolina any current because they had none to spare. On the west of the territory covered by this plant was another system consisting of many plants hooked together. They, however, had no electricity to spare and could do nothing. West of this company was the Alabama Power Co., operating over a large portion of Alabama and having quite a large system, with many hydroelectric and several steam plants hooked together. They had enough electricity for themselves, but they had none to spare. But just west of the Alabama Power Co. was the Government steam plant at Muscle Shoals, with a power capacity of 60,000 horsepower. Fires were started in these engines. Electricity was generated and given to the Alabama Power Co. The Alabama Power Co. spread this electricity through its system, and in turn was then able to grant to the power company in Georgia electricity equal to the amount it had received from Muscle Shoals. The company in turn gave power to the next company, and it gave to the North Carolina distribution system, and thus was relief brought by this relay system and North Carolina was supplied with all the electricity she needed. The effect of this was to transfer to North Carolina without loss enough electricity to save a catastrophe, although the distance between Muscle Shoals and North Carolina is about 800 miles.

Mr. President, in the beginning of electric service, when the current was generated by small plants unrelated to each other, State regulation was a simple matter. In present-day conditions when generating plants have grown to mammoth size, which of necessity are interlocked for efficient production and distribution over long distances, the control of electric service

has become increasingly a national problem. In the great game of financiering characteristic of our times control of the electric industry with its complicated structure of holding companies, its countless subsidiaries, watered stock, and concealed profits, is now in the hands of a few power magnates of New York and Chicago.

THE MENACE OF PRIVATE MONOPOLY OF POWER

The menace of the Power Trust is, in my judgment, even greater than that of oil. It happens that right now we have an infamous example of the lengths to which organized wealth will go in its greed for more riches and power. The stealing of Teapot Dome and Elk Hills naval oil reserves by Doheny and Sinclair in collusion with Albert B. Fall, a member of the Cabinet, is a climax in the long record of unscrupulous exploitation of the common people by the oil monopoly.

The Supreme Court has declared the transaction to have been fraudulently made by collusion and conspiracy between the parties. The Supreme Court has said that the company organized overnight to raise the funds out of which Fall was paid \$230,000 for his treachery to the United States Government was plainly created for an illegitimate purpose. It has recently been shown that at least \$75,000 of these funds raised for an illegitimate purpose were donated by Sinclair to pay Republican campaign expenses in 1920 and \$85,000 more was contributed by Sinclair, although at the moment the proof is lacking as to whether this latter batch of bonds came from the Continental Trading Co.

Mr. NORRIS. Mr. President, may I interrupt the Senator?

Mr. LA FOLLETTE. Certainly.

Mr. NORRIS. I did not understand fully the statement where the Senator referred to "the latter batch of bonds." What batch did he have in mind?

Mr. LA FOLLETTE. I was referring to the \$85,000 in bonds as to which Mr. Hays testified that he did not know whether or not they were Continental Trading Co. bonds, but said they were Government bonds and came from Sinclair.

Mr. NORRIS. I have been told by a member of the Public Lands Committee that, as I recall, \$25,000 of those bonds which Mr. Hays turned over to Upham were by Upham turned over to somebody else, whom he got to make a contribution of \$25,000 to the fund and to whom he gave these bonds with which to make up his payment; that later on this owner of these same bonds that came from Hays turned the bonds over to some institution—I have for the moment forgotten the name of the institution—to which he had made a pledge to make a contribution; that that institution has the bonds now, and that they are all Continental Trading Co. bonds.

Mr. LA FOLLETTE. That makes \$100,000 in bonds from Mr. Sinclair to the Republican campaign committee which are now known to have been Continental Trading Co. bonds. That information, I think, must have been brought out at the hearing this morning.

Mr. NORRIS. It came out to-day, as I have been informed.

Mr. LA FOLLETTE. I thank the Senator very much for his interruption.

And yet the parties to the transaction are challenging the right of the Senate and the courts to the knowledge of where the rest of the fraudulent fund was spent.

What the oil monopoly has done to demoralize and disgrace Government and business is only a foretaste of what the electric monopoly can and will do if allowed to proceed unchecked for another decade or so. We all know how the tremendous power wielded by the railroads has been abused. We know what the banking monopoly can do to credit and to the making of war in Nicaragua. But the power of oil and transportation and banking and all other great monopolies combined is not to be compared to the power which will be in the hands of electric magnates with their strangle hold on industry, on transportation, on the functioning of government, and on the private life of every citizen in the land.

Mr. President, Col. Frank Smith, of Illinois, has recently been denied a seat in the United States Senate. A Senate investigation of the Illinois primary disclosed that an enormous slush fund had been used to secure the Republican nomination to the Senate of Col. Frank Smith, chairman of the Illinois Commerce Commission, which has jurisdiction of public-utility regulation in Illinois.

Mr. Samuel Insull, head of a gigantic public-utility combination, was discovered contributing, in violation of express statute, great sums of money for political purposes. Nearly a million dollars was shown to have been used to control the Illinois primary. Col. Frank Smith was shown to be the chief beneficiary of the Insull slush fund. That, Mr. President, is an example of the kind of activity in which great public-utility magnates are engaged.

The Senator from Montana [Mr. WALSH], after an exhaustive study of public utilities, the results of which he set forth in a very able speech at the last session of Congress, introduced a resolution for their investigation. It brought to the Capitol the greatest lobby ever known in all the history of this country, and I do not except the lobby of the railroads in the days of the land-grant steals. The outcome of that phase of the power issue at this session of Congress is now a matter of history.

Representatives of the power monopoly arrogantly declared at the last session of Congress that no bill shall be passed by Congress authorizing the Government, in case the future may require it, to exercise an option for the protection of the people or the development of its resources. A spokesman for the power monopoly said: "I represent an investment of \$7,000,000,000 and we do not propose to let the Government enter the power business."

The power monopoly makes the issue that Congress may legislate only as the power monopoly dictates. It raises the issue of whether the Government or the Power Trust is to determine the destiny of the people of the United States. It is another manifestation of the age-long struggle of whether the people shall govern or whether they shall be governed by an autocracy—in our time by an autocracy of organized wealth.

A JUST CRITICISM

Not all the able men connected with the administration of the electric power monopoly are satisfied with its methods and leadership. At least one has had the courage and independence to criticize the policy which is being pursued and to point out its danger.

Mr. Frank Putnam, of Milwaukee, who for the last dozen years has been associated with one of the largest groups of American utility companies, has published a pamphlet under date of February, 1928, on the subject of electrical house heating, in which he foresees a new era of electric service. Previous to his connection with the utility companies, Mr. Putnam was a newspaper writer who fought the earlier antisocial policies of the public utility companies. In this pamphlet he says, among other things:

The leading men of the industry—

Referring to the power industry—

I think, have blundered in permitting or encouraging its national organizations to lobby openly and arrogantly in Washington against Government flood control, irrigation, and water-supply undertakings for the avowed purpose of "keeping the Government out of business." * * * I am not alone among close students of the situation who think the utilities would find it more profitable to be at their next big real job than to be spending money and energy defeating Los Angeles' desire for more drinking water and electric energy from Boulder Canyon, or the Mississippi Valley's desire for flood control with public power development to help pay for it, or the Muscle Shoals region's desire for low-cost energy from the mighty hydroplant there at public expense.

Mr. Putnam says further:

The long-established public policy under which the States protect utilities in enjoyment of monopolies in their several areas requires that the utilities shall supply adequate good service at its fair cost and no more.

Again he says:

As in the case of steam railroads, State regulation will be found incompetent to control in the public interest an industry national in scope, an industry whose products and services will increasingly be sold across State boundaries. Federal regulation will begin and will gradually absorb the functions and powers which even now the State authorities find themselves in large part unable to administer effectively.

The experience of well-known cities, towns, and communities well distributed over the country in the public ownership, operation, and distribution of electric power, has demonstrated that the rates paid to the electric-power monopoly are far in excess of the standard set by Mr. Putnam—"adequate good service at its fair cost and no more."

LESSON TO BE LEARNED FROM ONTARIO'S EXPERIENCE

In 1926 consumers in the United States bought 56,984,000,000 kilowatt-hours of electricity. Industrial-power users and electric railways used 41,964,000,000 kilowatt-hours, paying \$519,100,000, or an average of somewhat over 1.2 cents a kilowatt-hour. From the 15,000,000,000 kilowatt-hours supplied for domestic, commercial, and street lighting, the power companies drew a revenue of \$1,018,200,000—an average of nearly 6.8 cents a kilowatt-hour. American consumers paid in 1926 a power bill of \$1,537,300,000.

In this same year of 1926 consumers in Ontario, Canada, were paying to their publicly owned power system an average of a little over 2 cents a kilowatt-hour for domestic, commercial, and street lighting. For industrial and electric railway power they paid slightly less than 1.2 cents a kilowatt-hour.

Had American consumers of electric power been able to purchase electricity as cheaply as did the citizens of Ontario, they would have paid out, instead of \$1,537,300,000, only \$805,312,600. Had American consumers been able to buy at Ontario rates they would have saved \$731,987,400—nearly half the amount which they did pay.

The difference can not be explained by alleging that Ontario power users had to pay an unjust share of electric bills. If American industrial power users had been able to purchase their power at Ontario rates instead of American rates, they would have paid nearly \$29,000,000 less than they did pay in 1926.

Costs of electric-power production have now decreased far enough that domestic consumers need no longer subsidize industrial consumers.

The Ontario Hydroelectric Commission realizes this. Hence, while American domestic consumers still pay an average rate of 7.37 cents a kilowatt-hour, Ontario domestic consumers in 1926 purchased their electricity at an average of 1.81 cents. Of course the amount paid by specific consumers varied with the size of towns and consequent cost of distribution. Detailed figures for domestic consumers are as follows:

Average kilowatt-hour

	Cents
In 21 cities over 10,000 population.....	1.66
In 48 towns over 2,000 population.....	2.05
In 174 villages under 2,000 population.....	3.15

Even a consumer in a small village in Ontario is able to light his home and enjoy conveniences of electrical service at prices he could pay, instead of the 8, 12, or even more cents a kilowatt-hour which he would have paid in this country.

Niagara Falls is not responsible. It by no means furnishes all the power for the Ontario system, which includes several other and smaller hydro developments. Even these were able to supply power at 3 and 4 cents—in practically no case above 5 cents a kilowatt-hour.

This is in startling contrast with the situation at Birmingham, Ala., where the Alabama Power Co. supplies hydroelectric power at 7.45 cents. Meantime the Toronto consumer, also using hydro power, pays 1.7 cents, and the Winnipeg domestic consumer, using power from the local publicly owned hydro system, pays 1.05 cents.

The Ontario Hydroelectric Commission has no monopoly of successful public operation of electric power systems in Canada. Twenty years ago domestic consumers in Winnipeg paid 20 cents a kilowatt-hour to a private company. Consumers in Vancouver still pay 6 cents. In Montreal they are paying 6½ cents. The average rate in Winnipeg for domestic lighting in 1926 was 2.6 cents. Special rates are offered for domestic cooking, so that the average rate for all domestic consumption was 1.05 cents. Power rates, of course, were still lower, and the average for all energy sold was 0.788 of a cent a kilowatt-hour. Vancouver and Montreal have private companies; Winnipeg is supplied by its municipally operated plant.

PUBLIC OWNERSHIP IN THE UNITED STATES

The outstanding instances of public operation in the United States are to be found, to a large degree, in the great cities of the Pacific coast. The Seattle hydroelectric plant supplies 90,000 customers, provides liberally for depreciation, meets all interest and bond-retirement charges when due, accumulates a profit for municipal purposes, and yet charges rates ranging from 5½ cents to 1 mill per kilowatt-hour, depending upon quantity and purpose.

Both Seattle and Tacoma not only provide electric light at unusually low prices, but also supply power for cooking and heating at still lower rates—Tacoma at only one-half cent a kilowatt-hour. Appreciation of the benefits which Seattle and Tacoma have gotten from public operation is shown by the 50,000-horsepower municipal hydroelectric plant now being built by the city of Everett, Wash.

Though charging only 5½ cents a kilowatt-hour for domestic current and offering manufacturers power at rates as low as those anywhere else on the Pacific coast, the Los Angeles public-power system in 1926 made a profit of \$2,796,452, after deducting all interest, sinking-fund, and depreciation charges. Ralph L. Criswell, former president of the Los Angeles City Council, estimates that the lower rates made possible by public operation of public utilities are saving Los Angeles consumers \$10,000,000 a year.

The great opportunity inherent in public ownership of power plants is indicated by the existence of more than 2,500 municipally owned power systems in the United States. It is true that certain plants, equipped with antiquated machinery or unwisely financed, have been sold to larger power companies; but as many more cities, when confronted with the choice of selling out or of modernizing their plants themselves, have discovered it profitable to continue public operation, and new municipal power plants are being undertaken every month.

Successful public ownership is not a matter of water power. Steam-power plants offer no obstacles to satisfactory public operation. That has been the experience of Springfield, Ill. Its latest report contains a table making an instructive comparison between the rates of the municipally operated plant at Springfield and the rates of the privately operated plants in other Illinois cities of comparable size. The profitability of public operation, not to a small group of common-stock owners, but to the large number of power consumers, is shown effectively.

City	150 K. W. H. domestic lighting	1,500 K. W. H. commercial lighting	4,000 K. W. H. 30 H. P. Act Conn load
Springfield	\$5.28	\$30.00	\$68.00
Bloomington	15.00	100.50	166.00
Danville	11.25	84.00	142.00
Decatur	15.00	96.00	162.50
East St. Louis	7.43	64.97	101.89
Elgin	15.00	73.12	213.00
Jacksonville	16.25	116.25	192.50
Peoria	6.84	55.28	98.10
Quincy	9.75	58.50	118.00
Urbana	13.00	97.50	174.00

The Springfield plant charges 6 cents for the first 30 kilowatt-hours used for lighting, 3 cents for the next 70 kilowatt-hours, and 2½ cents for everything over 100 kilowatt-hours. For cooking, the rate is only 1½ cents a kilowatt-hour. Industrial power is supplied at similarly low rates—1¼ cents a kilowatt-hour in addition to a small service charge per horsepower per month.

When public power plants can supply electricity at rates such as these, I am compelled to ask, Why should the Wisconsin Light & Power Co., supplying power to 200 Wisconsin communities, find it necessary to charge domestic consumers an average price of 9.4 cents a kilowatt-hour and industrial consumers an average of 2.7 cents a kilowatt-hour?

As Senator HOWELL has so well and ably demonstrated on this floor again and again, it is not necessary for the public to have a monopoly of electric power to insure reasonable rates. Public competition, or even fear of competition, is enough under certain conditions to bring down rates to a decent level for the consumer and a fair profit to the producer.

THE OPPORTUNITY OFFERED BY MUSCLE SHOALS

In view of the conditions that confront us, the duty of the Senate, in my judgment, is clear. Muscle Shoals is already a publicly owned power station. One hundred and fifty million dollars of the people's money has been invested in the development. It was appropriated under the authorization of the 1918 statute, which provided that the plant should be operated by the Government.

Section 124 of the national defense act of 1916 provides as follows:

The plant or plants provided for under this act shall be constructed and operated solely by the Government and not in conjunction with any other industry or enterprise carried on by private capital.

It was under such a condition that the \$150,000,000 which has been invested in Muscle Shoals was obtained. Unless that statute had contained that provision, no such appropriation could have been passed through the Congress. Muscle Shoals offers the opportunity for the Government to make a comparison in performance, operation, and service with a similar product made by private power. The plant has been developed with Government funds and is now in Government operation.

The significance of the opportunity is even greater when we consider the key position of Muscle Shoals. It is near the heart of future southern industrial development. The possibility for interconnection, thus regularizing the supply in other parts of the South, has already been demonstrated in this debate.

In volume the power at Muscle Shoals is an important ingredient of the southern supply. In 1926 when approximately 3,240,000,000 kilowatt-hours were generated in the States of Alabama, Georgia, Mississippi, and Tennessee, 436,308,735 kilowatt-hours of this amount were generated at Muscle Shoals. In 1927 this rose to 565,609,500 kilowatt-hours, even though the plant was

only getting fairly well under way and its sole customer, the Alabama Power Co., was using as little power as possible from the Muscle Shoals plant. With the existing hydroelectric and steam power plant, engineers are certain that at least 700,000,000 kilowatt-hours can be supplied, as this resolution directs, and when proper water storage has been provided, the capacity of Wilson Dam will, it is estimated, rise to from 1,500,000,000 to 2,000,000,000 kilowatt-hours a year. The tremendous responsibility resting upon the Congress is clear.

Honest companies producing power, as in the light of present knowledge it can be produced, contenting themselves with reasonable charges for their labors and capital funds, and with a due regard for the present and future requirement of electrical service, need have no fear of any program which this Congress may adopt or which the American people will demand.

Honest companies can have no proper objection to the setting up of public electricity-producing authorities competing for the power markets with private producers, so long as confiscation is not involved. A public power plant at Muscle Shoals, once operated on a permanent basis, offers a chance to test the highest standards of electric engineering, and if combined with adequate transmission facilities, will provide a most desirable "yardstick" with which to compare the relative merits of public and private undertakings, concerning which Dr. Walter Durand said two years ago:

Public operation is a test of public character just as private operation is a test of private character. We have had abundant opportunity to judge private character in the large-scale operation of utilities. The chance to try out public character on a similar scale is an imperative need to-day. Competition in method might eliminate the weaknesses and strengthen the strength of both public and private character. (W. R., May 26, 1926.)

Operation at Muscle Shoals by an efficiently organized public authority will assist materially in determining the question of the form of organization most expedient.

EXPERIENCE OF OTHER COUNTRIES

We should profit by the experience of other countries which, after considerable experimentation and investigation, have come to adopt a national power policy. And even though we may beg the question here to-day, and may beg it to-morrow, sooner or later Congress and the Government will have to adopt a national power policy. In Sweden, New Zealand, and South Africa publicly owned power stations have been put into operation in recent years to supply wide areas. The public authority confines itself to generation and transmission, leaving the work of distribution to private enterprise or municipalities. In none of these countries has the adoption of a national power policy meant revolutionary changes in industrial life. Existing private enterprises continue and expand, but they expand side by side and in cooperation and competition with the public undertakings.

The South African plan, adopted in 1922, provides for two authorities. It sets up an electricity control board as a regulatory body, with control over the licensing and regulation of private enterprises. At the same time an electric supply commission was established to purchase or to establish electrical supply undertakings and to coordinate these with the existing enterprises. It has set about its work efficiently and successfully, due without doubt to the fact that while control is retained in behalf of the public interest, the electric supply commission is free to operate like a private concern, without political interference. It has been described as a sort of public-utility corporation with government backing.

Germany, forced by the exigencies of postwar conditions to seek the very best plan of organizing its power resources, has made use of a similar scheme.

I desire to quote from "German power reorganization," by Mr. Quigley, which appears in *Electrical Power and National Progress* for 1925, page 102:

The work of reorganization of power supply has covered and is covering three stages:

1. The whole country becomes split up into a limited number of super-power zones according to the scheme elaborated in 1919. Each zone is covered by a number of trunk lines interconnecting distribution centers and acting as main transmission lines at extra-high voltage.

2. To avoid the difficulties and the dangers of bureaucratic administration, the work of interconnection is entrusted to power supply companies worked on the lines of private enterprise, the capital of which is owned by the State.

The last stage in the process lies in interconnection of the power zones with each other; the whole country becomes a network of transmission lines, working on a uniform voltage and uniform frequency.

An elaborate regional power scheme was evolved soon after the conclusion of the war, but of this scheme little now remains. At the

present moment three superpower zones have been delimited, the central German, the Saxon, and the Bavarian, while a fourth one, covering Rhineland-Westphalia, would have been also surveyed if the occupation of the Ruhr had not delayed progress. In the central zone one state-controlled company, the Elektrowerke Co., has now been in operation for several years, and supplies Berlin with electricity. In Saxony a similar company was formed in 1923, the Sächsische Co., and has now linked up Dresden with Leipzig through one main trunk line operating at 100,000 volts. This system is connected in the north to the Lauta power station of the Elektrowerke Co. and in the south to the network controlled by the Walchenseer Power Co., which acts in Bavaria in the same capacity as the Elektrowerke Co.

It is important to note that state control in the form of these companies begins and ends with generation and transmission; power is generated and supplied in bulk to certain distributing heads scattered over the transmission network, and from these heads authorized distributors carry out the work of distribution.

In that connection it is very similar in its organization to the Ontario system.

The price of power as supplied in bulk is only sufficient to cover the cost of generation and transmission without profits, and the price at which the authorized undertakers are allowed to sell power is controlled by the state, with a view to insuring a fair return on capital invested without unnecessary profiteering. * * * This system leads to pooling of power supplies, a better load factor, and lower average prices.

THE NATURE OF THE OPPOSITION TO PUBLIC OPERATION OF MUSCLE SHOALS

The character and inspiration of the bitter opposition to public operation of Muscle Shoals is by this time understood perfectly well by all of us. We all know, whether we are frank enough to admit it or not, that the opposition to the Norris resolution is only a single phase of a nation-wide campaign to checkmate every effort to preserve the public interest in the electric-power industry. If the power magnates have their way, the merits of the case will not be given consideration; private and special interests, though representing only a very small group of persons, will be protected at all costs. The joint committee of National Utility Associations, which is the superlobby of the National Electric Light Association, the American Electric Railways Association, and the American Gas Association, are extremely nervous. They fear that something may mar the continuance of the career of exploitation which they have so long been encouraged to expect. They have no scruples in using whatever means they can to block this measure. Misrepresentation and distortion of facts, as well as personal pressure, both direct and indirect, are being used and will be used against the Norris resolution just as they were employed to mangle the Walsh inquiry.

For seven years the dogged opposition of the power lobby has prevented a satisfactory utilization of the Muscle Shoals development. One of the worst slanders used by opponents of public operation has been that Congress, through its dilly-dallying, has shown itself incompetent to deal with problems of this kind. There has been shameful delay, but the responsibility must be justly fixed. It should rest, in the first place, upon the small group of men, who, to promote their own power interests, have been and are unwilling to tolerate any disposal of Muscle Shoals other than a gift to themselves. It should rest, in the second place, upon the power lobby, which has exercised its influence to prevent action.

As yet public operation for public advantage along really modern lines has been carried on in comparatively few places. The utilities are trying strenuously to prevent other experiments which would show the weaknesses of the traditional organization of the power industry. They hope to instill in the public mind the faith that because the industry has, for the most part, been organized in a certain way, the traditional way must necessarily be the most satisfactory way, no matter how much economic and technical conditions have changed. If they succeed, the small group of men who dominate the utilities financially can look forward to many years of happiness and comfort at the public expense.

They are not certain of victory. They are not certain of complete and permanent domination unhampered by effective safeguards of the public's interest in the industry.

WHY THE POWER MONOPOLY FEARS PUBLIC OPERATION

The gentlemen representing the joint committee of the National Utility Associations are afraid of a large-scale demonstration in the East of what the people of the Pacific coast and Ontario, Canada, already know—that power can be produced for service as well as for profit.

They are afraid that the people of the Southeast will discover that the rates of 7½ to 12 cents a kilowatt-hour, which they have been paying, are ridiculously high. They are afraid of new examples of efficient operation such as that of the municipal plant at Tacoma with its average rate of one and

one-twentieth cents a kilowatt-hour. The public-utility magnates are afraid that domestic-power consumers will get the idea that they, as well as favored large industrial consumers and the fortunate holders of voting common stock, are entitled to a share in the advantages of increasingly economical power production.

The utility interests are afraid that power consumers, both domestic and industrial, will learn that costs are unnecessarily high when, instead of following the example of modern integrated industries, the power industry clings to the antiquated luxury of subdividing itself into a hierarchy of construction companies, technical advisory companies, finance companies, holding companies, superholding companies, and super-superholding companies, each with its separate organization to be maintained and its separate profit to be earned.

They are afraid that power consumers will learn that the 8 per cent return on capital funds for the establishment of power plants, which the utilities claim they require, is needlessly extravagant. They are afraid that it will become known that capital charges need not become annuities upon the industry; that merely because our grandfathers purchased stock in an industry, it does not follow that our great-grandchildren should receive a dole from the earnings of that industry. They are afraid, furthermore, that it may be discovered that huge expenditures for "legal expenses"—none of them for the benefit of the consumer—are unnecessary; that the economical production of electric power is not promoted by the ownership of newspapers, the financing of election campaigns, the subsidizing of literary talent, and the employment of expensive attorneys and "legislative counsel" to oppose every activity which might reduce or regulate private profit.

Some of these people, of course, may be afraid of themselves losing the large profits which they would receive if their companies could swallow up the Muscle Shoals plant. The opposition of the power lobby as a whole, however, is based upon the ground that the power industry can not withstand a demonstration of how cheaply power can be produced.

PUBLIC OPERATION PRESENTS ONLY ECONOMIC AND ENGINEERING PROBLEMS

Mr. President, sooner or later it will be generally understood that the generation of electric power is not a mysterious rite which can be performed only by individuals having the peculiar talents of the financial manipulator. The production and transmission of power certainly, even if this may not appear to be quite as definitely true of the final distribution of power, is merely a matter of specific engineering and economic facts. It is a field of activity in which the qualities which make good salesmen, good advertising experts, and good stock-market riggers are of relatively low value.

The stock promoter and the juggler of accounts are distinctly undesirable as participants in the electrical industry, which, once the broad policies have been laid down, requires only two types of intelligence—that of the engineer and that of the economist. It is the engineer, not the business man, who has been responsible for the amazing progress in the electrical industry. Money alone can not buy such men. Granted reasonable compensation, which an industrial undertaking such as Muscle Shoals can easily pay, men of this sort can be had if the opportunities for constructive work on a permanent basis are present.

Monopolistic patent rights held in private hands can control the output and sale of turbines, but there are no patent rights in restricted ownership to limit the supply of intelligence—at least not yet. The brilliant careers of General Goethals and of Sir Adam Beck are only two of many examples of this fact. Men of this kind are responsible for countless great engineering works both in other countries and in the United States, for the building of the Muscle Shoals plant itself. Men of this kind are going to be entrusted with the work of protecting the Mississippi Valley against future floods—an enterprise whose importance will easily bear comparison with the enterprises of any privately organized electrical company.

It is, of course, true that initiative must always be "private," in the sense that it must always come from individuals. Private initiative, however, is not controlled by the employment in which those individuals are engaged. The initiative responsible for electric power developments has usually been that of engineers. This was the case at Muscle Shoals, except that the engineers happened to be in public rather than in private employment.

PUBLIC OPERATION PRESENTS ONLY ECONOMIC AND ENGINEERING PROBLEMS

There is nothing mysterious about the series of decisions that must be made in the establishment of a great power plant, such as this one at Muscle Shoals. The problems are all problems to be settled by deciding that, in view of specific engineering and economic facts about which there can be little

dispute, action should or should not be taken. Congress, directly or through its appropriate agencies, has, in effect, already decided that power ought to be developed at Muscle Shoals; that such a development will fit in with later and more extensive superpower developments; that in time a market can be found for all electricity generated; and that it is expedient to develop the Muscle Shoals site immediately, bearing in mind, of course, that all such undertakings are likely to have difficulty in meeting their full fixed charges for a few years until the market has been developed.

All of this Congress has decided; there is no opportunity for further initiative, private or public. The plant has begun operation.

We are now faced with the necessity of making certain additional decisions of the same type as those to which I have referred. The testimony of engineers and others conversant with the situation in the South is that use can be made now, or very soon, not only of the power now generated but of all the power which the Muscle Shoals plant can generate, at a price which will meet amply the costs of construction and operation. The sensible thing, therefore, is a decision to complete the Muscle Shoals project as rapidly as possible, as provided in the pending resolution.

Beyond that the only matter within the province of the Congress, though it is one of very great importance, is the setting up of legislative requirements that the sale of power be at a price adequate to meet all costs involved, including charges for depreciation and the amortization of the original cost, and that stipulations be made in selling power to protect the right of consumers to a share in the advantages of cheap power production. After that the problems of power generation are technical problems, to be decided by competent engineers, requiring the interference of business men no more than that of legislators.

The resolution before us authorizes the Secretary of War to construct transmission lines, to place the Government upon a fair basis for making contracts for the sale of electric power. The necessity for this provision is obvious, in view of the monopoly in the purchase of power at present enjoyed by the Alabama Power Co. through its ownership of the only transmission line from Muscle Shoals. If we decide, as we should, that transmission lines are to be built, the planning and building of these lines again are matters of engineering.

They are matters which the Government engineers in charge of the plant are entirely competent to determine, having regard to the long-run development of a superpower system throughout the South and Southeast. In addition, it is entirely probable that the possibility of building other transmission lines from Muscle Shoals will induce the Alabama Power Co. to permit the joint use of its transmission lines, at reasonable compensation, by other power users not directly connected with Muscle Shoals at present.

In all of this a clear distinction must be kept in mind between the generation and transmission of power on the one hand and the local distribution of power on the other. The activities involved in the latter, responsible it is said for 70 per cent of the total cost to the consumer, are what opponents of this resolution enjoy dwelling upon when they wax eloquent over the dangers of bureaucracy.

Mr. President, the Norris resolution in no way proposes that the Muscle Shoals authorities shall engage in the retailing of power. That remains a matter for private companies or for municipalities, whichever the people of each locality may prefer. Some of the fears of the power lobby no doubt are due to the realization that given an adequate supply of cheap power, municipalities could and would compete effectively with private power distributors. Almost without exception, wherever municipal plants have proven unsuccessful it has been due to the small size of the plant and inability therefore to compete with larger and therefore more economical superpower chains. Public operation of Muscle Shoals would materially assist municipalities within its transmission area in economically distributing power themselves, if they so desire.

In all of this, can anyone show tangible cause why public operation could not be adequate and efficient, just as effective as private operation? It is absurd to assert that this proposal would put "the Government into business." The Norris plan would merely insure operation by one group of men working in the public interest rather than by another working in the interest of a handful of private individuals. All necessary initiative has been taken. The problem of financing has been handled more economically than it would have been by private enterprise. The remaining problems of construction and operation are matters not of business enterprise but of engineering technique. Opposition which continues in spite of these facts is dictated by apprehension on the part of the power combine that

the Government operation of Muscle Shoals will be highly successful.

An excellent concise statement of the fundamental issue which confronts the Senate is given in another connection by Commissioner Joseph B. Eastman, of the Interstate Commerce Commission, when he said:

The question of public ownership and operation is, therefore, not one of the theory respecting proper governmental functions but simply a question of practical expediency. Will better results be obtained if the State performs these governmental functions directly or if it farms them out for private enterprise to perform under public regulation?

PUBLIC OPERATION NEEDED TO PROTECT PUBLIC INTEREST

When, in spite of the existence of a regulatory system, holding companies are permitted to buy up power plants at boom prices in a frantic scramble to acquire the largest number of properties, with no regard whatever for their real value, and are then permitted to charge rates sufficient to earn a return upon these fictitious values, when these so-called values are further increased by all sorts of "intangible" factors, and when operating expenses are padded by large payments to advisory and financing companies, all controlled by the same holding corporation, we are confronted with the necessity of public competition to protect the public interest.

I have called attention to the course that is being followed in other countries which are eager to make the most that they can economically of their electric-power resources in South Africa, New Zealand, Germany, and Sweden. It seems astonishing that in this country opposition so bitter should meet an attempt to give to American industrial and domestic consumers the benefits of an improved organization of electrical supply. It is astounding that even in the Senate so much support should be found for an attitude unwilling even to test out fairly the possibilities of a method of electrical supply devoted to furthering the public interest, rather than to the feathering of financial nests.

The opponents of the Norris joint resolution place their case in a most unfortunate light through their unwillingness to bring forward a careful analysis of comparative costs in place of dogmatic assertions with which they content themselves.

EVIDENCE FURNISHED BY MUSCLE SHOALS ITSELF

This disinclination for specific evidence is, however, in my judgment, founded upon good reasons. The evidence most germane to this discussion is that supplied by the Muscle Shoals plant itself, and that evidence supports the position of those who insist upon continued public operation.

Statements have already been made that the operation of Muscle Shoals is creating a deficit. The existence of a deficit thus far is indisputable. Without an understanding of the actual situation at Muscle Shoals this fact, stated without explanation, is well calculated to give the impression which foes of public operation desire.

Two factors have affected the operation of Muscle Shoals thus far. The first is that all hydroelectric installation requires a period of time before coming to full operation. Machinery must be tested and readjusted, and operation at best is intermittent.

Sale of power from Muscle Shoals began September 12, 1925. From then until the end of the fiscal year, June 30, 1926—a period of great operating fluctuations—the total number of kilowatt-hours generated was 231,859,900, yielding a revenue of \$416,818. In the subsequent fiscal year, 1926-27, however, a total of 511,262,400 kilowatt-hours were generated, with revenues of \$1,070,321. The totals for the calendar year 1927 were 565,609,500 kilowatt-hours and revenues of \$1,168,763, a sum covering not only operating expenses—amounting to \$229,739 during the last fiscal year—and charges for depreciation and amortization, but making a contribution toward interest upon the funds invested as well.

It is evident that the difference between the financial results for the first two years were considerable, as anyone conversant with the establishment of new power plants would expect. Even if a deficit should occur from the operations of a number of years, this would only be in accordance with the financial history of virtually every other electric development in the country.

The second factor is one for which Congress is directly responsible. Its failure to provide for the completion of the Muscle Shoals plant has held down the output of electric power. Its failure to provide for the building of such transmission lines as might be necessary has thus far given a monopoly of the power generated to the Alabama Power Co., owning the only transmission lines connecting with Muscle Shoals. Its failure to provide for permanent operation has led to the making of a contract with the Alabama Power Co. under which the company

pays only 2.06 mills a kilowatt-hour for such power as it sees fit to take.

The Alabama Power Co. itself has only recently increased the capacity of its transmission line, though it still can not take all the power generated, even if it should wish to do so. Concerning the purchases of the Alabama Power Co., Major General Jadwin testified before the House Appropriations Committee last December:

They—

Referring to the Alabama Power Co.—

only take it where it is to their advantage to take it, excepting that our agreement with them is that they will take it in preference to the development of their steam power. They operate so as to get the fullest advantage of all their water-power plants, but we take preference over generating it by steam at the same price.

Mr. President, while power was thus being wasted, citizens of Muscle Shoals and other cities in northern Alabama applied vainly for the right to purchase power directly from the Muscle Shoals plant. Due to the character of its arrangements with the power company, the War Department declined to grant their request.

As long as this situation continues it is impossible that the financial yield of the Muscle Shoals plant can increase very rapidly. It will be otherwise if the Norris joint resolution shall be adopted. Completion of the plant, building of transmission lines to supply the available and potential markets for power, and the making of contracts for a reasonable period of years and at a fair and adequate price will enable the Muscle Shoals plant to operate as successfully, financially, as it has already been operating technically.

Had the Senate been unwise enough two years ago to accept the bid of the 13 allied power companies, the receipts from Muscle Shoals would have been \$600,000, instead of the \$1,168,763 received from "inefficient" Government operation at a price much lower than would have been necessary had Congress acted so as to permit the making of adequate contracts.

The unreasonable delay, founded upon blind prejudice, in passing legislation which will permit the proper utilization of Muscle Shoals ought to be ended by this session of Congress. Complete development of the Tennessee River, for both power and navigation, should be undertaken as rapidly as possible. We are confronted with a situation which requires immediate action. We have an organization that has been working effectively and which should continue to do so. We should realize that we have a going concern on our hands. If the structure of its organization can be improved, that should by all means be done.

It is more important, however, that provision be made for the completion of Muscle Shoals enterprise, and for the sale of the electrical energy now being produced there upon a fair basis.

THE FERTILIZER FALLACY

One of the misrepresentations to which the power lobby has succeeded in giving the widest currency is the notion that Muscle Shoals is in some peculiar manner especially suited to the production of fertilizers. The fallacy of this idea has been exposed repeatedly and again in the course of the present debate by the Senator from Nebraska [Mr. NORRIS].

I will content myself with quoting from a recent discussion of "Muscle Shoals, nitrogen, and farm fertilizers," by R. O. E. Davis, who is carrying on investigations in the use of fixed nitrogen for the Bureau of Chemistry and Soils of the Department of Agriculture, in the January, 1928, *Annals of the American Academy of Political and Social Science*. He says:

RELATION OF MUSCLE SHOALS PLANTS TO POWER

The association in the public mind of nitrogen fixation with power and with fertilizers has led to the belief that the Muscle Shoals plants can be economically operated for the production of fertilizers because of the power available there. Nitrate plant No. 2 at Muscle Shoals is a cyanamide plant, and this method for fixation of nitrogen is already being rapidly displaced throughout the world by the direct synthetic methods. The consumption of power by the cyanamide process is about four times that of the synthetic processes. Plant No. 1 at Sheffield, based on the direct synthetic method, was designed for only one-fifth the capacity of plant No. 2, and only a portion representing about one-fourth its capacity was ever completed sufficiently to make a test run. It was shown that this plant would have to be rebuilt to be operative. The cost of remodeling the plant would be considerable. In addition, the cost of power is not an important consideration in the operation of this process.

To operate plant No. 2 at Muscle Shoals would be to utilize the power in fixing nitrogen by the process that is being rapidly displaced in the competitive markets of the world. To use the power for the operation of the direct synthetic process, it would be necessary to con-

struct a plant based on the latest developments in this field, developments that have shown hydroelectric power unnecessary in its operation. The use of this power for the commercial operation of either process would be inadvisable, since it would employ it either in an uneconomic or an unnecessary manner and would prevent its utilization in processes where it is essential or its distribution for industrial and domestic purposes. This is of real importance, for Muscle Shoals is so located that the demands upon its power, especially to the west and south, will undoubtedly increase.

Hydroelectric power is not necessary for nitrogen fixation by the direct synthesis method. This method employs the gases hydrogen and nitrogen and brings about their combination as ammonia under pressure at a temperature of around 500° C. in the presence of a catalyst. In the first and largest plants of this sort, constructed in Germany, the hydrogen and nitrogen mixtures were prepared by the reaction of air and steam on coke in gas producers and purified before use for combination as ammonia. The principal power requirement is in the compression of the gases to several hundred atmospheres before they enter the reaction chamber, and this power can be obtained just as readily from coal as from water.

Mr. President, I ask unanimous consent that the remainder of the article may be incorporated in the *RECORD* as a part of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

The matter referred to is as follows:

It is possible to obtain hydrogen from water by electrolysis and in this method electric power is necessary. However, the direct synthesis process when operated with electrolytic hydrogen requires about 20 per cent more power than the cyanamide instead of 75 per cent less when chemical means of producing the hydrogen are used. Hence the electrolytic hydrogen is used principally where it is obtained as a by-product from an electrochemical process as in the manufacture of chlorine. There are a number of places where waste hydrogen is being produced as a by-product and this hydrogen may be utilized in the direct synthesis process.

The possibilities in the production of ammonia make the situation somewhat uncertain, but show a definite drift toward the use of coal in producing hydrogen. This makes it unwise either to tie up for a long time any considerable amount of water power in a process that is being rapidly superseded, or in using it in a process in which power is of minor significance.

The fact that nitrogen fixation is more closely allied with coal than with hydroelectric power makes it more important for the economical development of the industry that the plants be close to coal-producing centers. Such locations also have the advantage of distributing the nitrogen-fixation plants and from the standpoint of fertilizer distribution would be an additional saving in freight rates over that due to the production of the more concentrated products already referred to.

THE SITUATION AT MUSCLE SHOALS

At Muscle Shoals there is a large water power available, developed for use in fixing nitrogen by a process that at the time was well understood and dependable. This process is now being rapidly displaced throughout the world by the direct synthetic methods, in which hydroelectric power is not necessary. The power not necessary for nitrogen fixation will find a market in the rapidly developing public utilities and industries of the region.

Of the two plants at Muscle Shoals, plant No. 1 is of small capacity and will require reconstruction to be put in operative condition on a process for direct synthesis of ammonia, and plant No. 2 is a complete cyanamide plant of 40,000 tons nitrogen capacity, built as a war-time necessity, but tending toward obsolescence because of the rapid development of direct synthetic methods. The present-day development of nitrogen fixation does not require hydroelectric power. In fact the industry is more closely allied to the coal industry than to water power.

The commercial development of nitrogen fixation plants in this country is taking place rapidly as evidenced by the establishment of a number of direct synthetic plants, and the projection of plans for other plants by two of the largest chemical manufacturing concerns in the country. Large amounts of new types of fertilizers from the nitrogen fixation products will not be produced, however, until the market develops for these materials; and the market must be developed through a campaign of education regarding the properties and use of the new materials. It is inevitable that the use of fertilizers will increase and the area of use widen, also that, with the present sources limited, the concentrated chemical products will form the basis of the future fertilizer industry.

Plans for the utilization of Muscle Shoals have ranged from private lease and operation of the power and nitrogen fixation plants to Government ownership and operation of both; and from the separation of power and nitrate plants under private operation to the sale of power, and the operation of the plants by the Government for experimental and educational purposes in developing the new forms of fertilizers. Whatever the solution of the problem is, it should take

account of the ultimate demand for hydroelectric power in that region, the development of the nitrogen fixation industry in relation to power, and the development and introduction of the new fertilizer materials.

Mr. LA FOLLETTE. Mr. President, doubtless it will become possible to produce fertilizers much more cheaply than heretofore. The advantages of more economical production should, however, go to the farmer and not to private corporations. Funds for experimentation to the end that fertilizers may be produced more cheaply should be available. They are made available by the Norris joint resolution, which thus carries out the desire of those who wish Muscle Shoals dedicated to the advancement of agriculture.

The Norris joint resolution does not, however, permit a private corporation to make use of Muscle Shoals until it succeeds in developing a cheaper method of production which can then be carried on in other plants unlimited by the restrictions upon profits which would necessarily, and properly, form part of any lease of Muscle Shoals. Nor does the Norris joint resolution permit a corporation, ostensibly organized for the manufacture of fertilizers, to enter upon the wholesaling of power as soon as it has perfunctorily complied with the conditions of its lease. Surely none of the Members of the Senate are so guileless that they fancy that a limitation upon the profits of one corporation from the sale of power would prevent it from selling power at a "reasonable" price to another corporation, owned by the same stockholders, and entirely unchecked by the conditions binding the first corporation.

By tolerating the repeated representations of these so-called fertilizer companies, we have assisted them in deceiving an unfortunately large number of farmers. It is high time that hypocrisy be abandoned. If we intend to make a gift of the Muscle Shoals site to private power companies, let us do so frankly, without deluding either ourselves or the farmers, who are justly eager to secure fertilizers at a price better adjusted to their needs.

The farmer as a stalking-horse for predatory interests has again been given a rôle which he has, unfortunately, been required to occupy too often. It was in the name of the farmer that the timber and stone act was passed. It was in his name that the land-grant steals were put through Congress. His name is taken in vain in an effort to permit the seizing of Muscle Shoals. The Senator from Nebraska [Mr. NORRIS] has riddled the fertilizer scheme at Muscle Shoals. He has not left a leg for them to stand on.

The Norris joint resolution provides for the use of the profits from Muscle Shoals operation for the necessary experimentation in the fixation of nitrogen which the flux of the science demands. The passage of the joint resolution in its present form will do more to bring about the cheapening of fertilizer than any other act which Congress could pass.

THE DEMAGOGUERY OF BUSINESS

We have heard of the demagoguery of politics. There is a demagoguery of business which is far more harmful in its effects than any of the political demagoguery which this country has experienced. Representatives of the utilities call attention to the millions of shareholders in the industry. They neglect to point out that all but a few of these shareholders hold stocks the return upon which is fixed, and the owners of which have no control over the operations of the business which is called theirs. These people—I am speaking of those whose investments were made honestly—are interested only in safety for the interest upon the funds which they have invested. They are not the people who, under the guise of taking the Government out of business, are really engaged in putting business into politics, in making a business of political maneuvering and political corruption to the end that they may profit to the fullest extent.

One of the gravest evils of American politics has been the levying of compulsory assessments upon office holders in order to finance the machinations of political rings. Political office-holders have, however, occasionally been defended against this imposition. The fate of the power consumer thus far has been otherwise. The thousands and millions of dollars expended by the manipulators of the utilities have been derived from compulsory assessments, but from compulsory assessments levied upon the consumers of electric power. As yet, the American people have little understanding of the proportion of the amounts recorded by their electricity and gas bills which represent nothing more than so-called legal expenses to cover the expense of influencing the opinions of these very consumers and of carrying on lobbies both here and at the capital of every State in the Union.

We have heard a little of the campaign contributions made by power companies, and what we have heard is evidently only the beginning. Can anyone contend seriously that contributions of

this sort constitute a proper cost of power production? It is with funds dishonestly collected and expended—when not dishonestly, then in the course of a campaign of misrepresentation—that the greater part of the opposition to this joint resolution is being financed.

The issue with which we are now dealing is only a single phase of one of the gravest problems confronting this Nation. It is necessary to determine whether the production of electrical power shall be a means of increasing national industrial effectiveness and the standard of living of every American citizen or whether it shall be a means of supplying profit, unconscionable profit, to a few individuals.

The responsibility of formulating a national power policy rests upon Congress. The deliberation and adoption of this policy must take place here and not in the city of New York at 420 Lexington Avenue.

I have called attention to the advantages which will result from continued and more effective public operation of Muscle Shoals. It should in the first instance serve the power consumers within its area. It should in the second instance aid us in evaluating the results of the organization of the electric-power industry as it has grown up in other parts of the country. Attempts are being made to divert our attention. We must keep the issue clear. We can easily dissipate another of our national heritages. It is our duty to devote the resources of Muscle Shoals to the welfare of the people of the Southeast and to the welfare of the entire United States.

Mr. President, to-day the issue involved in electric power is a dominant issue. To-morrow it will be paramount. This question of electric power and its distribution to the consumers of America will never be settled until it is settled rightly. It will present itself in phase after phase, in session after session of Congress. It will be fought out upon the floor of this Chamber and upon the floor at the other end of the Capitol.

Already at this session of Congress one phase of the power issue has been passed upon by the Senate of the United States. In that contest the power interests won a victory. They mangled and hamstrung the Walsh resolution for an investigation of that industry; but, Mr. President, I believe it was a temporary and a costly victory. In my humble opinion, more Senators will be retired to private life by angry constituencies upon the vote on the Walsh resolution than were defeated upon the vote when the seating of Newberry was an issue in the Senate. The power industry has made the issue, Mr. President. It is going to a higher court than this for final decision. It is going to be settled ultimately by the people of the United States.

For seven years—since 1921 the senior Senator from Nebraska [Mr. NORRIS], single-handed and alone, has conducted one of the most dramatic, one of the most courageous contests on behalf of the public interests ever waged in the Senate of the United States. By the sheer force of logic, backed by his courage and determination, he has beaten back, time after time, the power interests determined to take away from the people of the United States this prize at Muscle Shoals. They have been disguised in one uniform and then in another; but each time the senior Senator from Nebraska has stripped them of their false apparel and revealed them in their true and proper character here in the Senate of the United States.

It is rumored that there is a majority of 10 in this body to defeat the Norris joint resolution. I trust this is not so; but, if it should prove to be so, then the people of the United States will attend to the matter. They will retire to private life and elect in their stead enough Senators to reverse that majority, who are prepared to stand here and fight the power monopoly and to defend the interests of the public in this greatest of economic issues confronting us to-day for solution.

Mr. HEFLIN. Mr. President, I offer an amendment to the amendment of the Senator from Mississippi [Mr. HARRISON], which I ask to have read and have pending.

The PRESIDING OFFICER (Mr. BARKLEY in the chair). The Senator from Alabama offers an amendment to the pending amendment.

Mr. HEFLIN. I want to have it read and lie on the table.

The PRESIDING OFFICER. The amendment to the amendment will be read.

The Chief Clerk read as follows:

On page 3, following line 9, insert a new numbered section, to read as follows:

"SEC. —. All contracts for lease of the Muscle Shoals power properties or for the sale of the power therefrom shall provide that whenever, upon recommendation of the president of the American Farm Bureau Federation, the national master of the National Grange, and the president of the Farmers' Educational and Cooperative Union, the President of the United States shall decide that the Muscle Shoals

power is needed for the manufacture of commercial fertilizers, either through the use of nitrate plant No. 2 or otherwise, said power shall be subject to recall for the manufacture of such fertilizers, and any such contract for lease or sale executed by the Secretary of War shall be subject to cancellation by the President when, in his judgment, the needs of agriculture shall require it."

The PRESIDING OFFICER. The amendment will lie on the table and be printed.

Mr. BLACK. Mr. President, I ask unanimous consent to insert in the Record, at the request of a citizen of Sheffield, Ala., a letter which he has received from the counsel, I believe, of the Tacoma lighting plant with reference to rates at Tacoma as compared with rates in certain southern cities. I should like to state that these rates show a great amount more paid for power in these southern cities than in Tacoma.

I am inserting this communication at the request of a citizen of Sheffield, who has also sent me a telegram, and I believe has sent one to the Senator from Tennessee [Mr. McKellar], supporting the Cyanamid bid. He desires, however, to have these comparative rates put in the Record.

I also ask unanimous consent to insert in the Record a report made by Chester H. Gray, Washington representative of the American Farm Bureau Federation, to the board of directors of the American Farm Bureau Federation touching his legislative work in Washington. I do this at his request, in view of the fact that the statement has been made, according to my recollection, that Mr. Gray has spent practically all his time on the Muscle Shoals project. This will show the complete work of his body and of his board during this year in legislative circles at Washington.

The PRESIDING OFFICER. Without objection, the matter referred to will be printed in the Record.

Mr. NORRIS. Mr. President, I want to make an inquiry. I hope the Senator from Alabama will excuse me. My attention was diverted. What was the article the Senator asked to have inserted in the Record?

Mr. BLACK. A report made by Chester Gray to the board of directors of the Farm Bureau with reference to his legislative work in Washington.

Mr. NORRIS. When was it made?

Mr. BLACK. I have the date. I think it shows the date on the face of it.

Mr. NORRIS. Was it recently?

Mr. BLACK. Yes.

Mr. NORRIS. One of the regular reports he makes?

Mr. BLACK. Yes; and the other report shows, according to the Senator's contention, that the rates at Tacoma, Wash., are cheaper in places where the people are supplied by public utilities.

The PRESIDING OFFICER. Is there objection to the request of the Senator from Alabama?

There being no objection, the matter was ordered to be printed in the Record, as follows:

The following is an analysis of a typical Tacoma light bill:

Nine-room home of Homer T. Bone. Consumption between November 15 and December 15, 1927. Total consumption, 686 kilowatt-hours on a combined residence lighting, refrigeration, and cooking circuit. Total charge for 686 kilowatt-hours was \$8.75.

Chattanooga, Tenn., advertises itself as "Dynamo of Dixie." It is a city of approximately the same size as Tacoma. It is supplied by hydroelectric plants.

Rate "I" is the lowest domestic rate in Chattanooga, and is filed with the State regulatory body as the "metered residence light, refrigeration, and cooking or heating combined" schedule. This schedule is as follows:

Nine cents per kilowatt-hour for first 40 kilowatt-hours per month.

Three cents per kilowatt-hour for all current used in excess of first 40 kilowatt-hours per month.

Minimum charge, \$3.15 per month.

Five per cent discount if paid within 10 days.

Compare this cheapest Chattanooga rate with the Tacoma rate. Based on a consumption of 686 kilowatt-hours, the Chattanooga charge will be as follows:

First 40 kilowatt-hours at 9 cents	\$3.60
Next 646 kilowatt-hours at 3 cents	19.38
Total, 686 kilowatt-hours	22.98
Less 5 per cent	1.14
Total Chattanooga charge	21.84
Chattanooga charge	21.84
Tacoma charge	8.75
Difference	13.09

By comparison it will be observed that the Tacoma rate is 40 per cent of the rate charged in Chattanooga, or, in other words, the Chatta-

nooga rate is 250 per cent of the Tacoma rate for exactly the same service.

During this period of time above mentioned, and on a separate metered circuit, this same home used 1,563 kilowatt-hours in electric heaters as an auxiliary to a hot-water heating system. The charge for this service was \$7.80, or at the rate of one-half cent per kilowatt-hour.

Copies of these bills in the city of Tacoma can be supplied to you if you desire to use them for comparison.

From the foregoing one will readily understand why the Power Trust operating in your section objects to any form of public ownership. It also objects to cities owning their own distribution systems and buying power at 2 mills from the Government Muscle Shoals plant and distributing it over their own municipal systems, and putting the profit in their city treasuries or giving it back to the consumers in the form of cheap light rates. Two mills is one-fifth of a cent per kilowatt-hour, which means that if this power was available for distribution over municipal systems, the people in the country adjacent to Muscle Shoals might enjoy light and power rates as cheap as those enjoyed in Tacoma. The city of Tacoma has been in the light and power business for nearly 40 years and its plant has been eminently successful. It now owns two big hydroelectric plants and is preparing to build a third hydro plant of an additional 50,000 horsepower installation. There may be men in the city of Tacoma who would like to force the city to abandon its municipal plant, but if such men are here they lack the courage to publicly offer such advice. If Tacoma paid the rates charged in Chattanooga, it would probably add to the bills of light and power consumers an amount of money almost equal to the total tax budget of the city of Tacoma—in other words, it would add frightfully to our tax burden, and all that we would get in exchange for this concession would be a few thousand dollars in taxes, which would represent but a small fraction of the added cost.

H. T. BONE.

REPORT OF CHESTER H. GRAY, WASHINGTON REPRESENTATIVE, TO THE BOARD OF DIRECTORS, AMERICAN FARM BUREAU FEDERATION, FEBRUARY 17, 1928

Perhaps the most effective way of making a report to the members of the board of directors in the middle of a congressional session is to take the resolutions of the ninth annual meeting, American Farm Bureau Federation, and consider the legislative projects upon which our Washington offices are interested in connection with each resolution.

Since Resolution 1 is a reaffirmation of many prior resolutions, let us delay its consideration for the end of this report.

Resolution 2 is entitled "A national agricultural policy." In carrying forward the intent and substance of this resolution there was introduced early in the session of Congress S. 1176, by Senator McNARY, and H. R. 7940, by Chairman HAUGEN. At the beginning of the session one might have doubted the ability of these measures to make any progress. Politics were more in evidence in regard to farm relief at that time than were economics. It was argued on the one side that such bills need not be considered by Congress, as they could not be passed, or, if passed, would be sure of a veto. On the other side it was maintained that success with such bills deserved continuing consideration on the part of Congress, and the question of veto was a matter which need not be a determining factor. In the Washington offices of the American Farm Bureau Federation it is realized that more than in the present instance our organization has found itself in opposition to presidential desires. This has been true on ship subsidy in former years, on certain phases of railroad legislation, on daylight saving, and on many other legislative projects which need not be mentioned. If our membership concludes that a project is necessary, it is the duty of those in the employ of the federation to carry out the membership mandates no matter where opposition might come from in so doing.

Hearings are still continuing on the House bill, and will continue under present indications for another week. On the Senate side the bill has been reported out exactly as it was introduced by Senator McNARY early in the session, with no hearings whatever. In due time it is expected the House committee will report its bill with some changes no doubt. Whichever branch of Congress acts upon farm relief first is not likely to have its measure taken as a whole by the other House, as was the case in the Sixty-ninth Congress. We may reasonably expect farm relief to go to conference this session, which will give us an opportunity finally to refine the bill into that final form which may be necessary after it has been subjected to amendments on both floors.

There has been no weakening or equivocation in our continuing advocacy of the equalization plan. That plan seems stronger among farm groups to-day than it ever has been, with more such groups represented at Washington before the House committee, and with a congressional strength which justifies us in being not alarmed at the fate of the measure in final roll calls.

Resolution 3 is entitled "Muscle Shoals." The Madden bill, named in that resolution, is now H. R. 8305. It has a companion measure on the Senate side, introduced by Senator WILLIS, of Ohio, S. 2786. Only one public appearance has been made by the Washington offices on this project before committees, and that was before the

Senate Committee on Agriculture. As is usual, we found ourselves then face to face with those who advocate Government operation at the Shoals instead of private operation, as is our position. Through a mistaken statement as to the power available at the shoals, efforts are made to make the American Farm Bureau Federation appear to be more interested in power than in fertilizers. When it is stated that 1,200,000 horsepower are available at the shoals in spite of the well-known engineering facts that with the Wilson Dam, Dam No. 3, 17 miles up the river, Cove Creek Reservoir, 400 miles up the river, and the steam plant enlarged 50 per cent—all provided for in the Willis-Madden bill—there will be only a total of between 300,000 and 340,000 horsepower, it is seen how misleading statements may be relative to the shoals. It will take about 280,000 to 300,000 horsepower to carry out the fertilizer guaranties and obligations in the Willis-Madden bills, so that with the actual amount of dependable power which will be had at the shoals when all the developments above enumerated are finished, there will be mighty little power left in the classification ordinarily called primary power.

The question of obsolescence of the Muscle Shoals enterprise has been recurrent for some time, so that it was necessary to meet this question fearlessly. Accordingly, the Washington offices issued a map showing where the plants all over the world which are operating by the cyanamide process—that being the one installed at the shoals—are situated. This map has created a profound sensation, as the authenticity of it can not well be called in question, when references are displayed on the face of the map showing where all data are secured. By meeting the question of obsolescence, and by actually letting it be known what the power developments are at Muscle Shoals, we have placed ourselves in a good position to carry on our advocacy of the Willis-Madden bill for private operation of the shoals as opposed to Government operation.

The Senate committee has reported out the Government operation resolution of Senator NORRIS, which does not provide for the development of the Tennessee River; does not return to the Government any of the costs which have thus far been expended on that project; does not limit the profit to be made on fertilizers to 8 per cent; makes no provision for a farmer board of control; and absolutely separates the power from the making of fertilizers. All of these aspects of the situation are adequately provided for in the Willis-Madden bill, and the power is to be sold under the latter measure in fertilizer sacks rather than over the high lines.

The House Military Affairs Committee is now reading the Muscle Shoals bill section by section in executive session with Mr. Bell, president of the American Cyanamid Co., with a representative of the Attorney General's office present. It is thought we are on the last lap of the deliberations of this committee prior to its report of the Madden bill.

Resolution 4 deals with the subject of "Equalizing domestic and foreign costs of production." Many bills have been introduced this session, particularly on the House side, to increase the import duties on agricultural products. Congressmen DICKINSON, FISH, FRENCH, SELVIG, HUDSPETH, and MANLOVE, not to mention others, have bills all of which upon specific agricultural commodities seek higher duties. It is known that other bills of similar nature are in process of preparation. It is understood that these bills may not make much progress this session, but they surely indicate that when the tariff act is to be revised agriculture is going to be present with its data and facts at hand before the Ways and Means Committee of the House to see that its products are more adequately cared for than has been the case heretofore. It is gradually developing in the minds of those who study the question of equalizing domestic and foreign costs that our present equipment and machinery for raising duties under the flexible provision of the present tariff act are inadequate; first, because the 50 per cent minimum is oftentimes not enough, and second, because the terms of section 315 of the tariff act, which section contains the flexible provision, are so specific and stringent that the United States Tariff Commission can not work with that expedition which the commission and others desire. However, time has not been permitted our Washington offices to secure the introduction of a bill to make more flexible and usable the present so-called flexible provision. In fact, it may not be necessary to do this, as the rewriting of the tariff act is not far distant, and in that rewriting more flexible provisions may be put in than were thought necessary when the present act was drafted.

An interesting phase of the importation of commodities is at hand in connection with our Resolution 4 in a fight which we have made to secure the free importation of raw phosphate rock from Morocco. This rock may be slightly higher in phosphoric content than is our domestic rock, and seemingly it has been sold to our consumers cheaper than our own production. When, however, this rock was sought to be introduced to our markets the antidumping provisions were called into force and effect, and the Customs Bureau, after having had hearings and referring the question to Secretary Mellon, has issued an order that the importation of Moroccan phosphate constitutes dumping, and therefore is subject to the imposition of an antidumping fee. This decision is equivalent to putting a tariff on plant-food constituents, which our farmers desire to get at the cheapest possible dollar. In this case before the Customs Bureau we have been very active trying to carry out the mandate of our membership in Resolution 4.

Considerable interest has been aroused in relation to our resolution on equalizing domestic and foreign costs of production in the banana situation. Formerly we have considered tropical vegetable oils as being obnoxious to our butter and animal fat producers, and now we are realizing that bananas are directly competitive to practically every fruit which is home grown with us. The board may be informed that in a short while a bill will be introduced seeking an import duty on bananas.

The entire tariff situation is such that, as has been previously called to the attention of the board, to handle it properly at Washington would require the full-time attention of a technologist. The members of the board may recollect that at former times suggestions have been made that if Budget requirements could permit, we should have a tariff technologist, a taxation specialist, and a cooperative marketing specialist for the enlarging work at Washington.

Continuing our reference to tariff matters, it may be stated that last week on the onion case alone there were at Washington representatives from 15 of our States, coming from all sections of our Nation, which occupied practically the full time of a week for Mr. Ogg, who had in advance given much of his time for a month in preparation for the case. Data have been under process of assembling for this case for a year, and it is by general consensus of opinion of those present, Members of Congress as well as producers, that the American Farm Bureau Federation had the scientific data without which the producers' case before the Tariff Commission would have been sadly situated. And now we have before us the milk and cream case, which is up for hearings in the middle of the congressional session, when our duties are supposed to be on legislation specifically. Following the milk and cream case comes along several others upon which our membership in various parts of the Nation is keenly interested.

Resolution 5 deals with taxation. Before the Ways and Means Committee full-length presentations were made upon the general question of Federal taxation, and later upon the specific question of reduction of Federal estate taxes. Our main advocacy in matters of Federal taxation are as follows:

- (a) A minimum reduction of the Federal debt \$1,000,000 annually;
- (b) Tax reduction is not the dominant issue, but debt reduction is;
- (c) The basis of paying Federal taxes is ability to pay;
- (d) Every citizen has an obligation to support the Federal Government in some manner relative to tax burdens; and
- (e) Necessity to consume is no proper basis for levying Federal taxes.

Trends are in evidence that exemptions and reductions in Federal-tax brackets are politically attractive. It must be stated that although exemptions do not repeal the tax right of the Federal Government, if carried to an inordinate extent they practically nullify the provisions of a revenue act; so, in the American Farm Bureau Federation, we do not advocate granting more and more exemptions with greater and greater reductions where those exemptions and reductions are made applicable either to those of big income-earning capacity or to those of more modest incomes.

Our fight to retain the estate taxes is a remarkable example of the efficacy of having a position and standing for it with data to substantiate the position taken. Much praise should be given Chairman GREEN, of the Ways and Means Committee, for his staunchness in the matter of the Federal estate tax—not meaning to imply that other members of that committee are not as loyal to the proposal of retaining the Federal estate tax as is true of the chairman.

We have to face constantly, as in a sort of twilight zone, the sales-tax idea. There is a residue of sales taxes in the revenue act now expiring. For instance, the so-called nuisance and admission taxes, the excise tax on automobiles, and such like, are virtually sales taxes and are paid by those who have not the greatest ability to pay, and who have oftentimes the greatest necessity to consume. We desire to clear the revenue act of the last vestige of sales taxes, such as those above enumerated, so that the proponents of sales taxation methods, if ever they try to impose such a method of taxation upon us, will be required to begin at zero and work up.

The State federations are giving studious attention it is found to Resolution 28 of the eighth annual meeting, but if we had in our organization a taxation specialist he could so synchronize the work of our many federations on tax matters that after a term of years our State-tax structures would be quite different from those which exist at the present time, and so much more uniform in character.

In the Senate the tax matter is held up until the middle of March when the income of the Government as related to the expenditures now being provided for by Congress can be more definitely known. It seems probable that the tax matter will get into such a tangle that the farm bureau program of no tax reduction will be very nearly accomplished. As the tax bill now stands it provides for a reduction of approximately \$300,000,000, which is really \$225,000,000 more than is necessary in the way of reduced Federal taxation. Especially is this true when we note that the Federal debt is not being wiped out as rapidly as was the case for a few years immediately following the war. The tendency is to pay less on the debt and reduce taxes more. This is, it may be said, a political tendency. The thing to be economically desired is to eliminate the debt and then, if desirable, reduce taxes.

Resolution 7 on flood control is of special importance to many of our members. The Washington offices in November made arguments before the House Flood Control Committee, dealing with the general phase of flood-control matters. Later a written statement was supplied Chairman REID of that committee, with maps and data of different kinds supplied occasionally. During the past week a statement was given Senator JONES, chairman of the Senate Commerce Committee, upon the same subject, accenting the main thoughts contained in Resolution 7. The controversy over flood control largely revolves around whether or not the Federal Government shall pay the expenses. Upon that question our position in the American Farm Bureau Federation is definitely stated in our resolution. The Washington offices have maintained throughout all hearings and arguments that the communities and States subject to inundation, having gone in years past to great expense to protect themselves, can not any longer carry the burden. Furthermore, since the question of flood control is by general recognition stated to be a national affair, the National Government consequently should bear the expense at least on the large navigable rivers.

Another point of controversy, though less in importance than the one of whether or not the Federal Government should bear the expense, is concerning the creation of a special Federal bureau or commission to have charge of flood-control affairs. Since we in our organization have stated a reliance on the Corps of Army Engineers for the technical carrying out of our flood-control program, the Washington offices have maintained that a special flood-control commission is not necessary. Such a special commission would necessarily need to go to the Army engineers to secure its technological information and would really be an extra and superfluous body carrying out the engineering details recommended to it by the Army engineers.

It has been stated in our presentations that the expense of the complete flood-control plan on the Mississippi River will fall between \$300,000,000 and \$1,000,000,000, with the lesser amount being much more exactly the one to be paid. It also has been suggested that each Congress will not be burdened with the necessity for large appropriations, but that from \$30,000,000 to \$50,000,000 per Congress will be sufficient to carry the work on for a term of years until the job is done. A decade is specified in our statement as being the least time during which such a large program might be consummated, and it has been pointed out that a generation may go by before the entire project is finished. In other words, we are not advocating necessarily a quick control of floods, but are advocating an effective control whenever the policy has been first determined upon by Congress, and then constructively followed out by the Army engineers, being supplied with appropriations by subsequent Congresses.

Recently a great deal of turmoil has arisen because neither committee has made a report on this subject. The slowness with which the committees are arriving at their recommendations makes the demands of last year for an extra session of Congress to go into the flood-control matter posthaste look ludicrous. Properly considered, the committees of Congress should be commended for the carefulness with which they are approaching this question: First, on account of the money involved, and, second, on account of the engineering facts which must be ascertained prior to the carrying out of any policy. It is to be expected that the most important features of our flood-control program as above outlined in Resolution 7 will be incorporated in the bills which are to be reported from the proper committees.

Resolution 8 is upon the subject of transportation. The Jones bill, S. 744, has been reported from the Senate Committee on Commerce, and declares it to be the continuing policy of the United States Government to maintain by replacement, rebuilding, and otherwise, an American merchant marine of permanent character. This bill, although not actually a Government operation bill, is being so considered generally, and is being attacked as committing our Government to a permanent policy of the Federal Government remaining in the shipping business. It is contended against this bill that if the Shipping Board is permitted to rebuild and reequip the Government owned and operated lines, then some provision should be made so that private lines can also be reequipped and reconditioned as necessity arises. If this is not done, the opponents of the Jones bill contend eventually we will have nothing but Government operation of ships, as the private-owned lines must disappear under trade competitions, much of which competition might come from the Federal Government itself. Those who dislike the Jones bill are advocating other solutions—such a one being to grant special rates for the carrying of mail abroad, in a manner similar to that which is in vogue with railroads. It is also explained that the operators of merchant marine can be saved some expense by having some of the employees on the vessels commissioned as members of the American merchant-marine reserve, and paid for by the Federal Government, so that in case of future wars we may have an adequately trained and governmentally commissioned marine body ready for instant service.

The question of direct subsidy to an American merchant marine has not gained headway at Washington, as it seems no one has the courage to advocate an outright payment from the Federal Treasury for losses sustained by private operators of lines under American registry. Much interest has been attracted recently by the proposal of an

American corporation to invest many millions of dollars in ships, providing the Government will loan such corporation perhaps 75 per cent of the capital costs of the vessels at low rates of interest and long-time amortization payments, with mail contracts and merchant marine reserves installed as above described.

Perhaps the Jones bill as reported from the Senate committee will not be the measure which is finally approved by Congress, but some compromise bill containing various of the features above enumerated may comprise our future merchant-marine policy.

Appropriations for the development of the large inland river system are making usual progress through Congress. An effort was made in the House to cut the appropriations below \$56,000,000, which was the sum designated by the Army engineers and advocated by all groups in favor of inland river development. When this question came to a vote on the floor of the House, although the committee report did not retain the entire \$56,000,000, that amount was reinstated by floor action with an overwhelming majority. It is not expected that any change in this situation will develop on the Senate side. The controversy to a large extent relative to the last few million dollars was on the question of whether or not the Missouri River should come in for its share of development and barge-line transportation.

Singular as it may seem in connection with inland river matters, and with the rivers and harbors bill generally, we have heard nothing this session about lake levels. At former times that subject was highly controversial in connection with the so-called Chicago Drainage Canal and the Illinois River Channel. On account of the large precipitation of rain in the last year, the lake levels are coming up again, and it seems to be under process of demonstration in a natural way that the lake level is coming back to where it often times has been before; and will in some future years drop low again because that has been the record of the lake levels since the sixties of the last century.

Dealing with the question of transportation, but more specifically in our flood-control presentation, we have stressed upon every occasion the necessity of surveys of our main streams. Until we know more about the water which comes down our streams, its varying amount from year to year, and from month to month, we can not know whether to build our dams for storage, for navigation, for power purposes, nor can we fit storage of water for flood-control purposes in with storage of water for power purposes. Time was in years gone by that navigation dams were built low and frequently, thus developing slight, if any, power from the water flowing down the streams. By the survey of one stream in the United States, the Tennessee River, we have discovered that navigation dams should be built high and less frequently, making, so to speak, lakes above the dam which would wonderfully help transportation and also give enough head of water to develop power which eventually would pay for the entire navigation project.

Lately the question of flood control comes into this picture so that now more than ever we need surveys of our tributary streams, so that the location of reservoir sites may be pointed out by Army engineers, which sites may be made useful to keep back that peak of water which causes disaster in flood times, later to disgorge the water for secondary power uses during the dry months, and so be ready in the next freshet period to retain the next flood. This question of surveying our streams, then, is as much a question of transportation and power as of flood control. It is encouraging to know that adequate funds for such surveys are coming along with the usual river and harbor features.

A bill (H. R. 107) by Mr. BURNES has been introduced to provide that toll bridges on our national highways shall revert to the Government when tolls have amortized costs and interest. This bill has not made progress, but will have more force put behind it when other matters are not so pressing. In the meantime the chartering of toll bridges is going merrily along, with the result that in the future the citizens who have paid taxes to build hard-surfaced highways will find barriers of private ownership erected to profit from the public expenditure.

Resolution 9 of the ninth annual meeting deals with agricultural appropriations. In carrying out this resolution the following projects have been actively supported:

(a) The Capper-Ketcham extension bill (S. 1285, H. R. 6074). These measures have been reported out of the Appropriations Committees in slightly different form. We are daily expecting a vote on the floor of the Senate, and we would have had such vote last week except that Senator KING, having heard from some people in his State who thought all the money was going to home economics, asked for more time to study the measure.

(b) The Robinson-Aswell bill, proposing \$500,000 for extension work in the flood areas, has been signed by the President.

(c) The appropriation for tuberculosis eradication is being carried along in the Department of Agriculture bill. Quarantine and control work for insect and plant pests and diseases are items in the agricultural bill which it is thought require special attention on our part.

(d) The effort to get more appropriations for fundamental research by the United States Department of Agriculture has resulted in the Budget Bureau providing a greater amount than heretofore for these purposes, but not to the extent we desired. Hearings have just been concluded before the House subcommittee on Agricultural Appropriations expressing the importance of this appropriation.

(e) The highway funds are not yet reported from the committees, but will be in due time, substantially the same amounts as last session, namely, \$75,000,000 for Federal aid to highways and \$7,500,000 for forest trails. Efforts are under way to get special items for highway and bridge reconstruction in the flooded areas.

(f) The United States Tariff Commission in its original estimates requested about \$950,000. When this request was filed with the Bureau of the Budget there was pending a deficiency bill carrying \$135,000, which under the conditions then existing would have been expected to pass. However, this deficiency bill was shaved to a bare \$4,000 when it finally passed. The Bureau of the Budget reduced the estimates of the Tariff Commission to approximately \$750,000, which is the approximate amount now being made available for the Tariff Commission. This amount is \$68,000 more than last year, but as above noted, is about \$200,000 less than the Tariff Commission desires. We are feeling our way toward having a special resolution introduced carrying more money for the Tariff Commission, as it seems useless to go before the Bureau of the Budget asking for a supplemental estimate for the commission. As above noted in this report dealing with Resolution 4, our work before the Tariff Commission is of tremendous interest to our membership, so that everything we can do to enable the commission to keep up with its work, especially the cases pending under the flexible provisions, would be very beneficial to us.

(g) An item for enforcement for the so-called Lenroot-Taber milk bill of the Sixty-ninth Congress is in the agricultural appropriation bill.

(h) It is useless and, in fact, nearly impossible to enumerate all of the items relative to appropriations which must be kept moving along in regard to agricultural affairs.

No effort, other than those above enumerated in this report, is made to follow all the bills on appropriation matters.

In carrying out the substance of Resolution 10, "European corn borer," the Washington office has been participant in many conferences on the subject; and as a result of all the interest in corn-borer control matters we have by recent introduction H. R. 10377 by Congressman PURNELL, which carried an authorization for \$10,000,000 for this work. Hearings on this measure will be had beginning about the 1st of March. The bill is very much like the one of last session, and provides, among other features, for expenditures for any necessary farm clean-up which is, in the judgment of the Secretary of Agriculture, in addition to the normal and usual farm operations.

Some excitement was caused in January by a delegation from Ohio which came to Washington expressing opposition to all corn-borer control work. It is not thought that this delegation made any permanent impression upon the congressional mind. However, it is recognized to be important that every possible farm agency be invoked for its assistance in getting the \$10,000,000 appropriation provided for in the Purnell bill on account of other pending and much larger appropriations, and also on account of the uncertainty of the revenue measure which in a former portion of this report was alluded to. It will not be as easy to get the \$10,000,000 this time as it was last session.

Resolution 11, "packer and stockyard act," has been started in its legislative career by the introduction of several bills dealing with packers and stockyards. The ones of most concern to us seem to be those introduced by Senator CAPPER, S. 2506, and a companion bill by Congressman HOPE. The Washington office has been unable to outline any policies in regard to these measures on account of the inability down to this time of getting the consensus of opinion expressed by our legislative committee and by similar committee of the National Livestock Producers' Association. It is suggested to the board of directors or to the legislative committee that this question should be decided soon, as hearings have once been announced for this measure on the Senate side, but were postponed; evidently because other people were not any more ready to decide the matter than are we.

The substance of the bills above referred to is contained in some definitions relative to what constitutes a "stockyard" and a "dealer" in livestock. A "stockyard" is defined substantially as any place, establishment, or facility conducted for profit and consisting of pens or other inclosures in which livestock is held for sale, slaughter, or shipment in sufficient volume as will affect the market value in commerce of such livestock. This definition will include not only the large livestock yards in such places as Buffalo, Chicago, and Kansas City, but also lesser concentration points out in more rural districts. The term "dealer" is defined as being any person, including any packer, engaged in the business of buying or selling livestock other than on a commission basis at a stockyard for slaughter or otherwise. With the enlarged definition of "stockyard" as above described, and with authority given the Secretary of Agriculture in other portions of the measure to grant certificates of public convenience and necessity, the thought is that all stockyards would be subject to regulation by governmental agencies, which heretofore has not been the case. The entire question of direct buying of livestock is tied up with this bill and is a highly controversial proposition.

Resolution 12, entitled "Immigration," has not yet taken up much of our time at Washington, but must be attended to forthwith after our return from this meeting of the board of directors. A long list

of bills have been introduced, only a few of which need be attended to by us.

The Box bill—H. R. 6465—seeks to make the quota provisions applicable to Mexico, Cuba, Canada, and other continental American countries. A new measure, which is said to reflect the administration point of view, has been introduced by Senator WATSON—S. 3019—and contains in its final sections a provision permitting the temporary admission as non-Americans for periods of not more than six months not to exceed 10,000, otherwise admissible aliens from each foreign country to perform seasonal or emergency labor in the United States.

Hearings on the general question of immigration, particularly in regard to the Box bill, on the House side were scheduled to begin February 16 and run throughout next week. It is expected that no radical change will be made in the immigration law, but as above stated there are many desirous of modifying the act. Our resolution deals specifically upon one phase of the immigration question, in that we ask for a congressional investigation before any additional immigration restrictions are applied to nationals on the Western Hemisphere. This phraseology could be interpreted seemingly only one way in regard to the Box bill, namely, to oppose that measure or any similar one that seeks to evoke at this time such restrictions.

Farm-loan affairs have not been prominent at Washington this winter, legislatively, down to date. Their prominence has been altogether in the personal relation, reference being made to the fight relative to confirmation of the three recess appointees, which confirmation was reported favorably by the Senate Committee on Banking and Currency and later was approved on the floor of the Senate with 13 dissenting votes. As far as can be remembered, no national farm organization filed formal opposition before the committee in regard to this confirmation matter.

It was inexpedient to start a legislative program such as is contemplated by the report to the American Farm Bureau Federation by the special farm loan committee until the personal equation relative to the confirmation matter was out of the way. Several Senators have been seen—and a few Congressmen—in regard to the report of this special farm loan committee. Recently we have had a dinner conference with half a dozen of the Senators whose records are constructive on farm-loan affairs to make arrangements for writing into definite form the recommendations of the farm loan committee. This work is now well under way and in a few days we may expect the introduction of a bill which will carry substantially the list of recommendations submitted by the farm loan committee.

It will be gratifying to the members of the committee to learn that their work is received in the finest way by all those to whom it is brought and is recognized to be, as it was intended to be, wholly constructive. This does not mean to imply that every particular recommendation of the 18 recommendations contained in the report is approved by every Member of Congress with whom conferences have been had on the subject, but the general lines and the recommendations meet with the happiest approval from all.

It is understood among those with whom conferences have been had upon this subject that this project when introduced as a bill will not be known as a farm bureau project, even though the American Farm Bureau Federation is wholly responsible for the origin of the work. It is thought more strategic not to have it designated under the name of any specific farm organization.

In cataloguing the list of bills under resolution 14, "omnibus," on account of the many items contained in the resolution, a hurried view will suffice:

(a) Funds are carried in the agricultural appropriations bill for developing the use of electricity on the farm.

(b) The same is true in regard to farm fire prevention.

(c) S. 1418, by CAPPER, and H. R. 11, by KELLY, each seeking to establish retail price fixing, are dead so far as this session of Congress is concerned.

(d) The Swing-Johnson bill, as is usual, has taken the center of the stage relative to the Colorado River, or, more commonly called the Boulder Dam project. The Washington office has assumed a neutral attitude down to date and will continue so to do unless the board of directors or the legislative committee can interpret that portion of Resolution 4 dealing with the Colorado River project. Whatever may be said about the Boulder Dam project it can not be stated with proof that the project will bring under cultivation more acreage to compete with other acreage in the United States.

Indeed, it may bring in more acreage; but if it is not developed by national legislation, the water will be used on the Mexican side with Japanese and Mexican labor and the farm products will come into our country with cheaper costs of production and thereby be more competitive than if the same water had been used for production purposes on the American side. In this connection your attention to the joint letter which the American Farm Bureau Federation, the National Grange, and the Farmers' Educational and Cooperative Union sent to Congress recently upon the general question of whether or not more acreage should be brought into cultivation. In this joint letter, which is herewith reproduced in full, it will be noted that no specific projects relating to irrigation, reclamation, or southern community welfare

interests are mentioned. The wisdom of avoiding the mention of any particular project in this connection is perhaps demonstrated in the case of Boulder Dam, above mentioned, where the water is going to be used on one side or another of the border, and if we do not use it the Mexicans will. No argument is intended by this to induce the board to make a decision one way or the other, but merely to clear the situation in regard to whether or not the Boulder Dam project should be condemned on the score that it brings in more acreage.

THE NATIONAL GRANGE,
THE AMERICAN FARM BUREAU FEDERATION,
THE FARMERS' EDUCATIONAL AND COOPERATIVE UNION,
Washington, D. C. February 8, 1928.

To the Members of the Seventieth Congress:

Everyone agrees that one of our major national problems is the successful handling of our agricultural surpluses. During the last six years our area under cultivation has declined nearly 15,000,000 acres but our surplus is still our great national problem.

Several measures are now before Congress which look toward increasing the acreage under cultivation, which would be secured by different methods in various bills. During the recent years of agricultural depression the organizations which we represent have repeatedly gone on record as opposing any legislation which would look toward placing any further acreage under production or additional producers upon farms, until agriculture has been restored to economic parity with other forms of industry and commerce.

When such parity is restored, increased agricultural production from our present developed acreage will amply care for any increase in our population for many years to come.

Most respectfully yours,

FRED BRENCMAN,
Washington Representative The National Grange.
CHESTER H. GRAY,
Washington Representative American Farm Bureau Federation.
CHARLES S. BARRETT,
President The Farmers Educational and
Cooperative Union of America.

The little amendment to the packers and stockyards act necessary to classify live poultry as livestock will have no difficulty in its legislative course.

The Walsh resolution seeking a governmental inquiry into the growth and capitalization of public utility corporations has had a tempestuous career thus far, and has, at the dictation of this report, been referred to the Federal Trade Commission for action rather than to a special senatorial committee as provided for in the original resolution. It is alleged that the power lobby has been very potent in Washington relative to this resolution, such influence seeking to have the resolution handled by the Federal Trade Commission rather than by a special Senate committee.

Forestry has assumed a position of spot-light importance this winter at Washington. The original McNary-Clarke Act set a pace for forestry development. The present McNary-Woodruff bill is progressing nicely and provides continuing appropriations for forestry work authorized in the original act. Also the McNary-McSweeney bill, which outlines continuing policies on forestry affairs, establishes forestry stations for the study and promotion of an enlarged forestry policy, and carries appropriations therefor. Hearings on the McNary-Woodruff bill have been held with a favorable report and are soon to be held on the McNary-McSweeney bill. Seemingly, no opposition will materialize. Such measures as the two above mentioned, dove-tailing as they do into the McNary-Clarke Act, when correlated with tax easement by State laws so that woodlots will not be taxed to death before they come into productiveness, will go far in obtaining a national forestry program. It is not intended to slight other bills on forest affairs, but only the bills which are of prime significance to us are enumerated.

A measure which seeks to require truth in market reports being intended to apply specifically to cotton matters is H. R. 1508 by Congressman WILSON, of Mississippi. This bill has not made to date any appreciable progress.

No progress has been made in regard to the measure to effect a stabilized price level and secure stable purchasing power of money through additional instructions to the Federal Reserve Board. This measure by Congressman STRONG of Kansas has had voluminous hearings before the Sixty-ninth Congress, but not before the Seventieth Congress. It is a question which needs the most profound study, has many points of merit in it, and will in some form or other be written into the Federal laws when more adequately understood.

Attention of the board is invited to the resolutions by the home and community department, which recommends continuing the work of the so-called Sheppard-Towner or maternity and infancy act. Since this resolution was not referred to the Resolutions Committee, and was not called to the attention of our voting delegates at the last annual meeting, it will give the Washington office somewhat more definite authority to proceed if the board will express its opinion upon the matter.

In 1925 our organization adopted a resolution in favor of appropriations for vocational training, or, as it is commonly called, the

Smith-Hughes work. The National Association of State Directors of Vocational Training has had introduced a bill which is based upon the Capper-Ketcham agricultural extension measure, and asks for similar appropriations for the vocational work. This bill has been heard before the House Committee on Education and the Senate Committee on Agriculture and Forestry, with no report from either committee thus far. It is not likely that the Director of the Budget will declare that the appropriations authorized in the bill are in keeping with the Budget requirements of the Nation, so that the progress of the measure will be handicapped if not stopped. The Washington offices have given attention to the measure and have stated frankly to the active proponents thereof that the bill is not likely to make progress this session, and will need more organizations behind it when it next starts through the legislative grist here. It is probable that the bill will be amended so that clearer lines of demarcation will be set out between the work of the Smith-Hughes forces, and that of the Smith-Lever employees.

Standard containers has been reported from the Senate Committee on Agriculture, and will be, under present indications, reported from the House Committee on Coinage, Weights, and Measures next Monday, February 20.

Truth in fabrics is promised consideration by the Senate Committee on Interstate Commerce as soon as one or two more major and troublesome questions are disposed of. On the House side the situation is not so favorable upon this project.

Postal affairs have been attended to by appearance before the House Committee on the Post Office and Post Roads, by advocating a director of the parcel post, a general protective policy for the Parcel Post System, in the making of rates, and that extra charges on any parcel-post packages should be removed. We also continue to advocate cheaper postage for library books, as well as the authority which will permit sending of insecticides, fungicides, and germicides through the mails.

The policy of the American Farm Bureau Federation on corn sugar legislation never has been of a positive nature. If we have any position on such legislation, it was stated in our resolution of 1926 in these words: "The American public is entitled to know where its food products are grown and the purity thereof * * *. We oppose the passage of any bill through Congress which would permit lowering the quality of our foods through adulteration." The last sentence, above quoted, it is recollected, was approved by the resolutions committee of the eighth annual meeting in 1926 as a general expression of our position on corn sugar legislation, which legislation was before the resolutions committee at that session for approval. The question uppermost in corn sugar legislation is whether or not such sugar should be sold without designating its nature and origin, or shall it be sold simply as sugar, the same as cane and beet products are merchandized. Since the chemical formation of the corn sugar is different from that of cane and beet sugars, it may be alleged, and is from many quarters so alleged, as being a breaking down of the pure food and drugs act to allow corn sugar to be sold simply as sugar.

Considerable confusion has resulted as to our position upon corn sugar legislation. Perhaps it would be well for the board of directors to give a positive statement, whereas our position down to date, as above noted, seems to be of a negative nature.

More than 40 individual projects are on our schedule at Washington, and each requires at times careful watching and pushing to keep it from falling by the wayside. If we should include individual appropriation items which are in fact legislative projects of themselves, it will make our project list at Washington well beyond 50.

In further consideration of resolution 1 a rapid enumeration of a few bills is made, inasmuch as such bills carry out policies which have been decided upon in a general way by our organization and reaffirmed in this resolution.

The wool standards bill, S. 1343, by ODDIE, H. R. 7459, by MORGAN, appropriates some money now lying in the Treasury for the development of the wool standards in our Nation. The bill has been reported from the House committee and is expected soon to be acted upon favorably in the Senate committee.

The agricultural attaché bill, S. 1178, by McNARY, H. R. 9107, by KETCHAM, permits the Department of Agriculture to appoint and sustain agricultural representatives abroad.

The decennial census bill, H. R. 393, by FENN, has not yet been reported by the committee and needs to be amended by having the date of the census to be on or about December 1, so that the data collected will fit into the statistical year of the Department of Agriculture; and needs further amendment by having designated in the bill certain types of information to be secured by enumerators.

Several barge line bills have been introduced, all seeking to develop barge-line transportation on various of our rivers.

Free passports for farmers studying agriculture abroad, H. J. Res. 198, by MCSWAIN, will be supported by our organization, especially since the American Farm Bureau Federation is making arrangements to conduct the second Cooperative Farm Bureau pilgrimage abroad.

The radio bill, S. 2318, extending the life of the Radio Commission another year, until it can more adequately bring under regulation the

various factors in radio activity, is in keeping with our resolution of a year or two ago.

The trade-mark bill, H. R. 6683, by VESTAL, contains one section which will permit the name "farm bureau" to be trade-marked and prevents its miscellaneous use by those unauthorized to use it.

A national agricultural day, H. J. Res. 22, is of minor importance, but is in keeping with one of our resolutions of a year or two ago.

This opportunity is taken to thank the board of directors, the legislative committee, President Thompson, and the State federations for a loyalty to our legislative program which is remarkable, and which it is believed never yet has been surpassed in the American Farm Bureau Federation. Particular comment should be given to the fact that our State federation officials are extremely careful not to take positions by correspondence or in person contrary to the general position of the American Farm Bureau Federation.

The legislative program at Washington is indeed very heavy. Even in a report as extended as this one it is impossible to get the entire program into words which explain it. The Washington representative has in times past, when Congress was not in session, been very glad to participate in series of meetings in States under the direction of State federations, so that the entire program might be more adequately brought to the membership. It is felt that in the period following adjournment of this session of Congress more of such work among the county bureaus and the State federations can be profitably done. The Washington representative holds himself ready to serve in this field work and hopes to be of assistance in promoting the strength of the organization generally by doing so.

Respectfully submitted.

CHESTER H. GRAY,
Washington Representative.

SUPPLEMENT

STATUS OF VARIOUS BILLS—CORRECTED TO FEBRUARY 18, 1928

(Note: X means approved; XX means opposed; XXX means needs amending)

Farm relief

X. S. 1176, by McNARY; ordered favorably reported February 15, without hearing.

X. H. R. 7940, by HAUGEN; hearing in progress.

Muscle Shoals

X. H. R. 8305, by MADDEN; hearings in progress.

X. S. 2786, by WILLIS.

XX. S. J. Res. 46, by NORRIS; reported to Senate February 13.

Taxation

X. H. R. 1, by GREEN; hearings held before House committee; reported December 7; passed House December 15 with amendments; held up by Senate committee awaiting tax returns.

Merchant marine

XXX. S. 744, by JONES; reported to Senate with amendments; passed Senate with amendments.

Capper-Ketcham extension service bill

X. S. 1285, by CAPPER; reported to Senate.

X. H. R. 10568, by KETCHAM; reported January 23.

Corn borer bill

X. H. R. 10377, by PURNELL.

Farm loan legislation

X. Way cleared for introduction of bill in Senate carrying out resolution of A. F. B. F.

Reforestation

X. H. R. 42, by FREE; authorizing \$100,000 annually as Federal aid for purchase and distribution of forest tree seeds and plants for reforestation. No hearings yet.

X. S. 1344, by ODDIE; companion bill to H. R. 42, by FREE.

(McNary-Woodruff bill)

X. S. 1181, by McNARY; reported January 9; passed Senate with amendments February 6.

X. H. R. 357, by WOODRUFF.

(McNary-McSweeney bill)

X. S. 1183, by McNARY.

X. H. R. 6091, by MCSWEENEY; hearings on March 1, 2, and 3.

Flood control

XXX. H. R. 8219, by REID of Illinois; reported by House Committee on Flood Control, and provides for all expenses to be paid by Federal Government.

Rivers and harbors bill

X. H. R. 11616, by DEMPSEY; containing appropriation of \$50,000,000 which includes development of upper Missouri River. Bill became a law

in the last Congress; appropriation for 1929 (fiscal year) being carried in War Department appropriation.

Standard container bill

X. H. R. 8907, by PERKINS; hearings will probably end February 20; early report expected in time for call of committee following Wednesday or week following.

X. S. 2148, by McNARY; reported without hearing February 14.

Decennial census bill

XXX. H. R. 393, by FENN; hearings in progress.

Wool standards bill

X. S. 1343, by ODDIE; no hearing yet.

X. H. R. 7459, by MORGAN; reported January 20.

Reduction of postal rates

XXX. H. R. 9296, by GRIEST; changes postal rates; hearings in progress.

X. S. 808, by COPELAND.

Truth in fabric

X. S. 1621, by CAPPER.

X. H. R. 7907, by FRENCH.

Agricultural attaché bill

X. S. 1178, by McNARY.

X. H. R., 9187, by KETCHAM.

Agricultural day resolution

X. H. J. Res. 28, by GARBER; no hearings.

Extension of barge lines

X. H. R. 10710, by DENISON.

X. H. R. 5686, by STRONG of Kansas.

X. H. R. 7362, by WILLIAM E. HULL.

X. S. 1760, by SHIPSTEAD.

Regulation of toll bridges

X. H. R. 107, by BURTNES; being held up by House Interstate Commerce Committee.

Research on poultry diseases

X. S. 812, by COPELAND.

Federal aid to highways

X. H. R. 383, by DOWELL; hearings in progress (\$75,000,000).

X. S. 2327, by PHIPPS.

Special Federal aid for roads and bridges in flood areas

X. H. R. 10864, by HALE; introduced February 13.

Packers and stockyards act

XXX. H. R. 490, by HAUGEN.

XXX. S. 2506, by CAPPER.

Immigration

XX. H. R. 6465, by BOX; making the quota provisions applicable to nationals of American countries.

Retail-price fixing

XX. S. 1418, by CAPPER.

XX. H. R. 11, by KELLY.

Classification of live poultry as livestock

X. S. J. Res. 42, by COPELAND; passed Senate by substituting H. J. Res. 112, February 2.

X. H. J. Res. 112, by LEA; passed House January 16. Approved by President.

Walsh resolution to investigate the Power Trust

X. S. Res. 83, by WALSH of Montana; reported by Committee on Interstate Commerce with amendments; amended to refer investigation to Federal Trade Commission, and passed in this form February 15.

Utilization of cotton

X. H. R. 10642, by BLANTON; introduced February 7; promoting utilization of low-grade cotton and putting embargo on all raw jute products.

X. H. R. 10763, by JONES; investigating new uses for cotton.

Free passports to American farmers traveling abroad

X. H. J. Res. 198, by MCSWAIN; permitting issuance of free passports to farmers traveling in Europe to study farming methods.

Extending Radio Commission

X. Watson radio bill.

Vocational training bill

XXX. S. 1731, by GEORGE; providing additional appropriations for Smith-Hughes work.

XXX. H. R. 9201, by MENGES; same as the above bill.

Corn sugar

XXX. S. 2806, by CAPPER; permits corn sugar to be used as substitute for cane and beet sugar.

XXX. H. R. 10022, by COLE of Iowa; same as above.

Trade-mark bill

X. H. R. 6683, by VESTAL; contains section allowing the name "farm bureau" to be trade-marked.

Boulder Dam

XXX. S. 728, by JOHNSON; provides for development of that project.
XXX. H. R. 5773, by SWING; same as the above bill.

Mr. HARRISON. Mr. President, I wish to inquire of the Senator from Nebraska if he will agree to a unanimous consent that a vote shall be taken upon the amendment now pending at a certain time to-morrow?

Mr. NORRIS. Mr. President, without consulting with anyone, I would hardly care to enter into an agreement.

Mr. SMITH. Mr. President, I would object to any unanimous-consent agreement until certain of us who have not had an opportunity of expressing ourselves specifically in reference to this legislation shall have such an opportunity.

Mr. NORRIS. I think there are some other Senators, besides the Senator from South Carolina, who feel that way.

Mr. HARRISON. I may say to the Senator from South Carolina that my reference was only to the amendment I have offered, which is pending.

Mr. SMITH. So far as I am concerned, I would not want to give my consent to any commitment on any one amendment until those of us who desire have had an opportunity to express ourselves with reference to the general legislation.

Mr. NORRIS. I agree with the Senator from South Carolina. While I would like to get a vote as soon as possible, I do not want to prevent anyone from speaking on the general subject. There are several Senators who want to talk on the subject generally, and I presume they would rather not do so after we had started voting. When that general debate shall be concluded, I myself will try to get an agreement to limit speeches, for instance, on the pending amendment, to 5 or 10 minutes, or some such time as that.

HOUSE BILLS AND JOINT RESOLUTIONS REFERRED

The following bills and joint resolutions were severally read twice by their titles and referred as indicated below:

H. R. 9830. An act authorizing the Great Falls Bridge Co., its successors and assigns, to construct, maintain, and operate a bridge across the Potomac River at or near the Great Falls; and

H. R. 11026. An act to provide for the coordination of the public-health activities of the Government, and for other purposes; to the Committee on Commerce.

H. R. 53. An act to provide for the collection and publication of statistics of tobacco by the Department of Agriculture;

H. R. 7459. An act to authorize the appropriation for use by the Secretary of Agriculture of certain funds for wool standards, and for other purposes;

H. R. 9495. An act to provide for the further development of agricultural extension work between the agricultural colleges in the several States receiving the benefits of the act entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," approved July 2, 1862, and all acts supplementary thereto, and the United States Department of Agriculture;

H. R. 11579. An act relating to investigation of new uses of cotton; and

H. J. Res. 215. Joint resolution to authorize the Secretary of Agriculture to accept a gift of certain lands in Clayton County, Iowa, for the purposes of the upper Mississippi River wild life and fish refuge act; to the Committee on Agriculture and Forestry.

H. J. Res. 140. Joint resolution to amend sections 1 and 2 of the act of March 3, 1891; ordered to be placed on the calendar.

COLUMBIA (S. C.) FEDERAL LAND AND INTERMEDIATE CREDIT BANK

Mr. BLEASE. Mr. President, a few days ago I introduced a resolution (S. Res. 159) asking that the condition of the Federal intermediate credit bank in my State be examined. I ask to have printed in the RECORD and referred to the Committee on Banking and Currency a few letters in reference to the condition of the intermediate credit bank. If the committee or somebody else does not soon do something the farmers down there will be robbed and then there will be no use of doing anything at all.

There being no objection, the letters were referred to the Committee on Banking and Currency and ordered to be printed in the RECORD, as follows:

[Letter from a prominent business man and farmer]

BEAUFORT, S. C., February 25, 1928.

Senator COLE L. BLEASE,
Senate Chamber, Washington, D. C.

DEAR SENATOR: I am glad to see by the newspaper to-day that you are going to have the intermediate credit bank investigated. The Government tried the local officers of the farmer's company that was connected with the intermediate credit bank, but it has not touched the men higher up in the intermediate credit bank. If the men higher up did not know what was going on down here, they should be removed for incompetency. But it is not reasonable to think they did not know. But whatever the facts are let us have them. Come down here with a committee and get at the bottom of it. Don't let them send another set of accountants just to get evidence for the Federal prosecuting officers. They have given us Beaufort people hell, and we are not the crooks they are making out.

An investigation will show what happened to the Beaufort bank that Arnold closed up. As a stockholder and a depositor, I would like to have some outside people come in here and have a real audit made of that bank. They can get a lot of information from Mr. Richardson, and he will give it. He can help in an investigation of the intermediate. They have him headed for Atlanta, but before they get him there I hope you can work it so that he can tell what he knows to some committee that is not trying to put him out of the way. Of course, it is the business of the State authorities and the Federal authorities, who have the prosecutions in hand, to convict him. But we need some one who is after the truth, no matter who it hits. Please help us to get this. Remember that one of those sentenced to jail is a young lady of Beaufort, who everyone knows would as soon cut off her hand as to steal a penny. She comes of an humble home, she worked for a small salary, and helped her home folks with that, and if she is being sent up to shield higher-ups that is something you will not stand for.

With regards,

Very sincerely,

[Letter from a prominent banker and farmer]

BEAUFORT, S. C., February 25, 1928.

Hon. COLE L. BLEASE,
Washington, D. C.

DEAR SIR: It gives me pleasure to thank you for introducing resolution in the Senate for investigation of the Federal Intermediate Credit Bank, Columbia, S. C., and, with Congressman HARE's good work started in the House, I can not help from feeling, when the true facts and conditions that have existed since the failure of Beaufort bank on our farmers in our section are known, the farmers will be rewarded for their labor in the end. Assuring you if I can be of any service to you, I want you to feel at liberty to call on me at any time.

With kind personal regards, I am,

Very truly yours,

[Letter from a prominent farmer and former member of South Carolina House of Representatives]

COLUMBIA, S. C., February 29, 1928.

Senator COLE L. BLEASE,
United States Senate, Washington, D. C.

DEAR SENATOR: Have seen with much satisfaction your resolution to have the Federal land bank at Columbia and its agricultural credit department investigated.

I trust that you will be able to carry it to a successful conclusion; it sadly needs looking into, and the interest of the farmer demands it.

With best regards, I am,

Yours very truly,

[Letter from a prominent farmer]

LATTA, S. C., February 27, 1928.

Senator COLE L. BLEASE,
Washington, D. C.

DEAR SENATOR: I noticed in the paper where you had introduced a resolution to investigate the Federal Intermediate Credit Bank of Columbia, S. C., which I think is much needed, judging by the hardship that these Columbia banks are allowing our local credit associations to rob the farmer.

To begin with, the farmer can't get any money unless he agrees to buy fertilizer from the agricultural loan, which in most cases costs from two to eight dollars more per ton than he would have to pay elsewhere.

As a rule, what money a farmer gets from these people costs him anywhere from 14 to 25 per cent interest. Our local credit people use the farmer's paper to get the money with and the farmer has to take what he can get and at their own price.

I have papers in my attorney's office in Dillon showing where these people held the farmer's money and fertilizer and caused the farmer a big loss.

Yours truly,

[Letter from a prominent farmer]

NESMITH, WILLIAMSBURG COUNTY, S. C., March 3, 1928.

Hon. COLE L. BLEASE,
Washington, D. C.

MY DEAR SENATOR: As a 56-year-old private citizen and supporter in your political "ups and downs," I wish to state that I was glad to read your resolution as to investigation of the Federal banks in South Carolina.

Be sure to look into red-tape methods and manners used by the "financial (middleman) pirates" in dealing out Government money to the farmer. He is first "hog tied" in matter of securities, then "bled to death" before balance of his "borrow" is available. Applies to both Federal land loans and South Carolina agricultural loans.

With best wishes,

Yours truly,

[Letter from former speaker of the House of Representatives of South Carolina, former circuit judge, and a very prominent attorney]

CAMDEN, S. C., March 2, 1928.

Hon. COLE L. BLEASE,
United States Senate,
Washington, D. C.

MY DEAR COLE: You can not imagine with what pleasure I have read of your resolution to have the Federal intermediate credit bank in Columbia thoroughly examined by committee of the Senate. You will recall that one night in the Jefferson Hotel I told you that I wanted to see you a few days in Washington, and wish to say that this was the very matter that I had in view. The record as developed in the trial of the Beaufort bank cases certainly warrant a thorough investigation of this bank in all of its ramifications from Washington down, and it is needless for me to say that at any time I can be of any service to you in the matter do not hesitate to call on me.

With kindest personal regards, I am

Sincerely yours,

[Letter from a former citizen of Greenwood County]

CHATTANOOGA, TENN., March 4, 1928.

Hon. COLE L. BLEASE,
Washington, D. C.

DEAR SENATOR: I notice a meager account in Greenwood, S. C., paper of your resolution for an investigation of the Federal land-bank affairs. Will you be good enough to advise me the nature of your investigations or along what lines. I was never able to get any satisfaction in writing them in regard to my affairs with them and was not accorded the rights that were due me as an honest, struggling farmer.

I was thrown out of my birthplace wholly on the recommendation of a little cigarette-smoking dude who was more interested in a woman who happened to be promenading the lobby of a hotel than he was in my conference with him.

I don't want to take up your time, but I would like to know what you are doing. My home was at Verdery, Greenwood County.

Yours, etc.,

UNVEILING EXERCISES AT STONE MOUNTAIN, GA.

Mr. HARRIS. I ask unanimous consent for the consideration of Senate Concurrent Resolution 12, submitted by me on the 6th instant.

Mr. CURTIS. Does it carry an appropriation?

Mr. HARRIS. None whatever.

Mr. CURTIS. Does it authorize in any way an appropriation?

Mr. HARRIS. Not at all.

Mr. CURTIS. Then I have no objection to its consideration.

Mr. JONES. Let it be read.

The PRESIDING OFFICER. The concurrent resolution will be read.

The concurrent resolution (S. Con. Res. 12) was read and agreed to, as follows:

Resolved by the Senate (the House of Representatives concurring), That there is hereby created a committee of Congress consisting of five Senators, to be appointed by the President of the Senate, and 10 Members of the House of Representatives, to be appointed by the Speaker of the House, to attend, as representing the Congress of the

United States, the exercises at Atlanta, Ga., April 9, 1928, incident to the unveiling of a portion of the Stone Mountain Monument by the Stone Mountain Confederate Monumental Association.

EXECUTIVE SESSION

Mr. CURTIS. I move that the Senate proceed to the consideration of executive business.

The motion was agreed to, and the Senate proceeded to the consideration of executive business. After five minutes spent in executive session the doors were reopened.

RECESS

Mr. CURTIS. I move that the Senate take a recess until tomorrow at 12 o'clock.

The motion was agreed to; and (at 4 o'clock and 55 minutes p. m.) the Senate took a recess until tomorrow, Friday, March 9, 1928, at 12 o'clock meridian.

NOMINATIONS

Executive nominations received by the Senate March 8 (legislative day of March 6), 1928

ENVOY EXTRAORDINARY AND MINISTER PLENIPOTENTIARY

Franklin Mott Gunther, of Virginia, to be envoy extraordinary and minister plenipotentiary of the United States of America to Egypt.

PROMOTIONS IN THE REGULAR ARMY

To be colonel

Lieut. Col. George Edwards Goodrich, Infantry, from March 6, 1928.

To be lieutenant colonel

Maj. Pelham Davis Glassford, Field Artillery, from March 6, 1928.

To be majors

Capt. Charles Andrew Willoughby, Infantry, from March 6, 1928.

Capt. Fred McIvor Logan, Infantry, from March 6, 1928.

To be captains

First Lieut. Mark Andrew Devine, jr., Cavalry, from March 6, 1928.

First Lieut. Edwin Eugene Aldrin, Air Corps, from March 6, 1928.

To be first lieutenants

Second Lieut. Carl Douglass Silverthorne, Cavalry, from March 2, 1928.

Second Lieut. Louis William Haskell, Infantry, from March 6, 1928.

Second Lieut. David Myron Schlatter, Air Corps, from March 6, 1928.

Second Lieut. Charles Trovella Myers, jr., Air Corps, from March 6, 1928.

MEDICAL CORPS

To be captain

First Lieut. Emery Ernest Alling, Medical Corps, from March 1, 1928.

CONFIRMATIONS

Executive nominations confirmed by the Senate March 8 (legislative day of March 6), 1928

POSTMASTERS

COLORADO

John Davis, Arriba.

Thomas B. Scott, Meeker.

ILLINOIS

Georgia W. Cooper, Congress Park.

INDIANA

Walter C. Belton, Acton.

IOWA

Lewis H. Roberts, Clinton.

Joseph D. Schaben, Earling.

NORTH CAROLINA

Richard J. Pace, East Flat Rock.

OHIO

Howard E. Foster, Chagrin Falls.

Frank H. Shaw, Germantown.

VIRGINIA

Robert L. Olinger, Blacksburg.

WASHINGTON

Lovilla R. H. Bratt, Richmond Beach.